2014

AIR CREW BRIEFING MANUAL

Northwest Territories Environment and Natural Resources

May 5, 2014

WELCOME TO THE GOVERNMENT OF THE NORTHWEST TERRITORIES' DEPARTMENT OF ENVIRONMENT AND NATURAL RESOURCES (ENR).

We are pleased to have you and your aircraft working for our Department and look forward to productive and rewarding assignments together.

This information package has been designed to help you become familiar with personnel and operative procedures presently in use throughout the Northwest Territories and provide for safe and efficient operations of all aircraft.

Please do not hesitate at any time to bring forth your thoughts and ideas that could help improve our aviation system. Our Aviation Services' email address is: aviation@gov.nt.ca

Our website address is:
www.enr.gov.nt.ca or www.nwtfire.com

TO REPORT A WILDLAND FIRE CALL: **1-877-698-3473 (NWT FIRE)**

TERRITORIAL 24-HOUR REPORT A POACHER LINE: **1-866-762-2437**

TERRITORIAL 24-HOUR SPILL REPORT LINE: **1-867-920-8130**
(collect calls accepted)

http://www.enr.gov.nt.ca/programs/wildland-fire/2014-aircraft-services-soa-information - **Standing Offer Agreement (SOA) information.**

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A. ORGANIZATION AND ADMINISTRATION

The Mandate of the Minister and Department of Environment and Natural Resources is to promote sustainable development through the management and protection of the quality, diversity and abundance of natural resources and the integrity of the environment.

The following are core functions the Department executes in support of natural resource management and protection of the environment:

Forest Management

The primary role of this division is to develop plans and promote the sustainable development of forest resources and to provide forest fire management services, including forest fire prevention, detection, monitoring, situation assessment and fire suppression action.

The Forest Management Division (FMD) provides the policy, planning and regulatory framework for the stewardship, protection, and sustainable management of forest resources on 75 million hectares of land in the Northwest Territories, 18% of Canada's entire forested area. Working with First Nations governments, communities, other governments, and non-governmental agencies on such a vast land mass, present's unique and complex challenges for forest managers.

The FMD co-ordinates and facilitates the implementation of forest management programs and services among the five Administrative Regions of ENR. The Regional Offices have the primary responsibility for delivery of programs. Regional staff implements forest resource and fire management programs for the Department. Regional personnel receive applications for approval to harvest, supervise harvesting activities, ensure compliance with standards, support community protection planning efforts, and carry out fire management activities under the direction of the Forest Management Division.

Some Regions have been further divided into districts each with their own administration and operation centre. Each Region and District is responsible for implementing the fire management program at the field level within their own jurisdiction. The overall Territorial program management, including activities such as establishing policy guidelines and standards for the air attack program, falls under the jurisdiction of the Forest Management Division that is located in Fort Smith.

Environment

This Division is responsible, along with several federal agencies, to ensure that release of contaminants into the air, water, and land are minimized and environmental impacts associated with industrial and community development are assessed and minimized. The Division also coordinates initiatives promoting energy awareness, energy alternatives, and energy efficiency. Their goal is to protect and enhance the environmental quality in the North. Departmental programs are designed to control the discharge of contaminants and reduce their impacts on the natural environment. This is a shared responsibility with Federal, Territorial, Aboriginal and Municipal agencies, as well as every resident of the Northwest Territories. Their goal is to promote energy conservation and the use of energy efficient technology in the Northwest Territories; identify and facilitate the development of alternative, local energy sources, which strengthen community economies; and promote and facilitate energy planning.

Wildlife Management

The role of this division is to develop plans and strategies, in partnership with co-management boards and Federal Departments to ensure the conservation and sustainable use of renewable resources through training, income support programs, wildlife and habitat research, and compliance. The division also develops policies and implements initiatives for the establishment and operation of protected areas in the NWT.

Water Resources

The Department of Environment and Natural Resources (ENR) is responsible for the managing water resources in the Mackenzie Valley and inland waters in the Inuvialuit Settlement Region through the administration of the Waters Act and regulations.

B. AIR ATTACK OPERATIONS

Territorial Air Attack Operations are controlled and coordinated through the Forest Management Division, Aviation Services section. Preseason helicopter and air tanker contracts are arranged for and distributed through Aviation Services. As there are very few roads in the NWT, almost all wildland fires receive some form of air attack activity. Although long-term contract helicopters and air tankers are assigned to a specific base of operations, it should be remembered that as an aircraft under contract to the Department of Environment and Natural Resources' fire program you are a Territorial Resource. That is to say, you could be used anywhere in the Northwest Territories even though you are assigned to a particular base.

Essentially you are under the "user authority" of the "Director, Forest Management" who has in most cases delegated this authority to the Territorial Duty Officer, the Resource Officers, or in the case of air tanker groups, the Air Attack Officer. With helicopters and in some cases fixed wing aircraft on fires, the control will be delegated to the Incident Commander. The pilot will be kept informed when this control is delegated or withdrawn. Bypassing of this person is not acceptable unless problems arise.

Each Region is responsible for the management and utilization of its assigned aircraft within the operational guidelines set out for forest fire management. Each Region is also expected to request (and justify) additional aircraft as required though the Forest Management Division in order to maintain resources for initial attack and ongoing wildland fire activities.

The management and operations of the Air Tanker Bases are the responsibility of the Forest Management Division. When a tanker group is stationed at a base within the Region, that Region's Duty Officer has the authority to prioritize fires and dispatch the group at his/her discretion. The group may not carry out Inter-Region dispatches unless approval has been granted through the Forest Management Division.

The Air Attack Officers and Tanker Base personnel are part of the Forest Management Division's staff and as such come under the general supervision of the Manager, Aviation Services. Once a group has been assigned a target and dispatched, the Air Attack Officer and his or her group must become part of the Region or District team.

C. COMMUNICATIONS

All pilots of aircraft operating under hire for Environment and Natural Resources (ENR) are required to file a Flight Note/Plan with the appropriate Region/District Office, Base Camp and/or Transport Canada (if after office hours or requested by ENR). A Flight Note/Plan must be filed with Transport Canada if the ENR Regional Radio Operator is not available (off-season etc.).

1. Flight Following/Flight Watch

Pilots on an ENR Flight/Note Plan will continuously monitor designated radio frequencies and report their position every thirty (30) minutes while in flight. Reports should take place at five (5) minutes to and twenty-five (25) minutes after the hour.

IT IS THE RESPONSIBILITY OF THE PILOT TO ESTABLISH AND MAINTAIN A PROPER FLIGHT WATCH WITH THE DISPATCH CENTRE TO WHICH THE AIRCRAFT HAS BEEN ASSIGNED.

When helicopters are assigned to a District/Region, assigned to or working on a wildland fire, the District radio will remain open and have a competent Operator on duty until the aircraft has landed and ceased operation for the day. The exception to this rule is through prior mutual agreement with the District/Region Office and the pilot. Then, flight following may be transferred from one station to another:

- ⇒ District to Region;
- ⇒ District to Fire (if aircraft terminates day at fire); or
- ⇒ District/Region to Transport Canada

The transferring station will ensure that the new flight watch transfer is established before closing down operations AND that the pilot is aware of the transfer and in agreement.

2. Loss of Radio Communications

It is the Department's policy that loss of radio communications in any contracted or chartered aircraft constitutes an unserviceable aircraft and is to be removed from services until the situation is rectified.

Radio communications means an air-to-air capability (VHF-AM) and air-to-ground capability (VHF-FM).

Please refer to Communications Directory (Appendix 12) for current frequencies.

3. Interagency Channel- Common Border Zone Frequency (NT/AB/WBNP/BC/Yukon)

(Wideband – no tones)

CH	RX	TX	AIR	DESIGNATION
5	153.47Mhz	153.47Mhz	122.05/129.80	Fire

4. NWT Air Tanker Base Channel

Channel 21 is the primary VHF-FM communications channel for all NWT air tanker bases on simplex 173.67.

D. AIR TRAFFIC CONTROL OVER WILDLAND FIRES

The area over and surrounding a wildland fire is a Restricted Air Space, under Canadian Aviation Regulation 601.15. This airspace restriction is defined as "over a forest fire area, or over any area that is located within five nautical miles of a forest fire area, at an altitude of less than 3,000 feet AGL." All flights between points within restricted airspace must be coordinated in such a manner as to entirely remove any possibility of collision.

When Air Tankers are deployed on wildland fires, the Birddog pilot is charged with the responsibility for control of air traffic over and in the immediate vicinity of the fire. In the absences of a Birddog, this responsibility will be assumed by the Incident Commander or his/her designate.

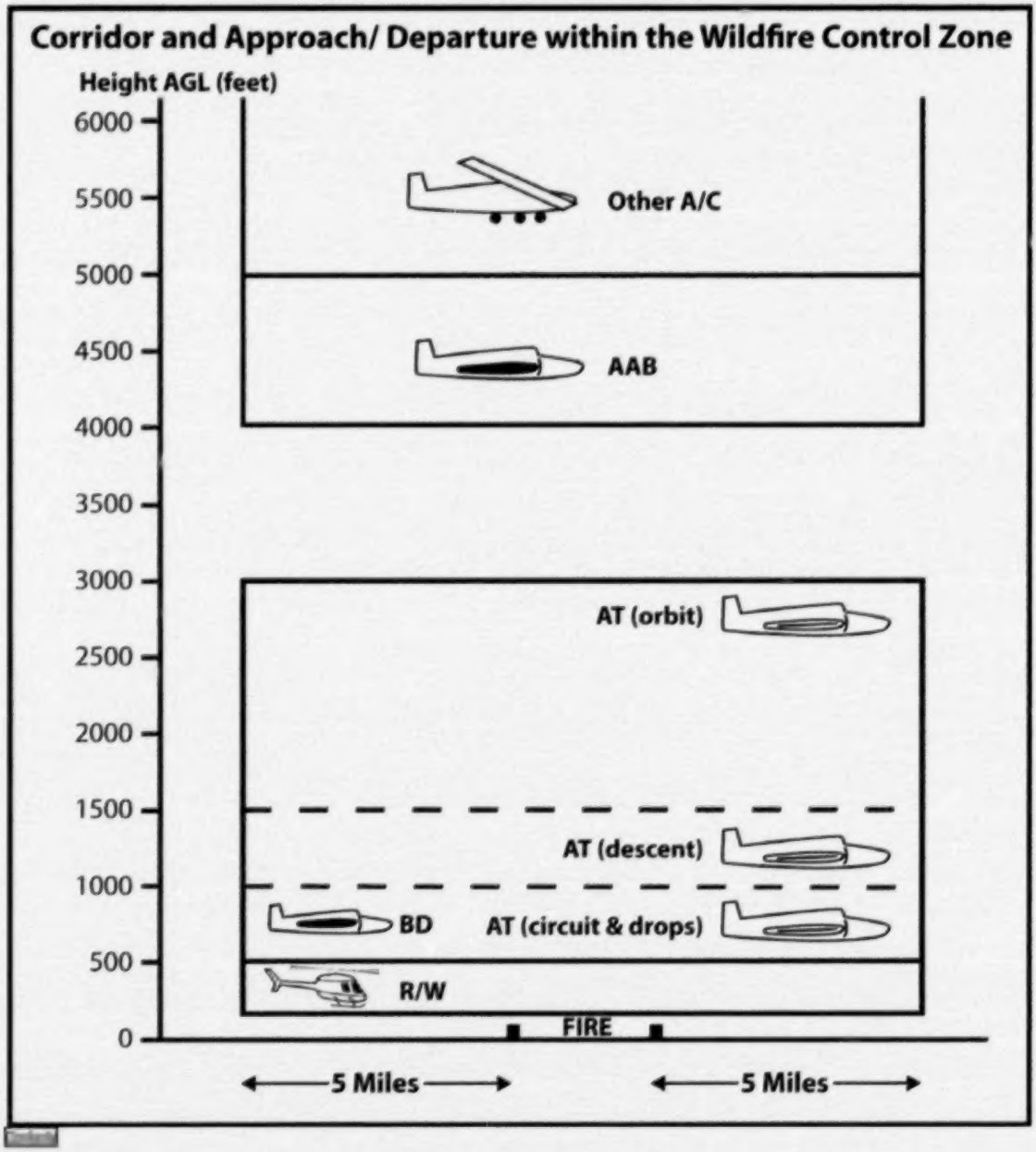
On dispatch, the Air Attack Officer will make contact with the Regional Office on the assigned FM frequency, and will remain so for the duration of the mission. **ALL** aircraft enroute to a wildland fire will monitor **126.7 MHZ** after clearing the airport control zone. Once an aircraft is five miles back of the fire, contact must be made with the Birddog pilot for clearance into the area on 122.05. All other aircraft will maintain communication on the air-to-air frequency **(122.05 MHZ)**. In the event the Incident Commander is on the ground, the assigned FM frequency is to be utilized. The working Birddog aircraft will be on the dedicated primary bombing frequency or assigned – 122.65 – primary/122.25 secondary. Additional (assigned) bombing frequencies – 122.4 / 122.425 / 122.625 / 122.9 / 122.95 / 131.85.

While on the wildland fire, Air Tankers will use the bombing frequency for communication with the Air Attack Officer. The Birddog pilot must be advised of and clear all other intended aircraft movement in the zone (take offs, landings, altitude, direction, etc.) on **122.05 MHZ**. On aircraft other than tankers, **only the pilot-in-command** will communicate with the Birddog regarding air traffic control.

The VHF-AM radios are only to be used by the aircraft pilots and their Air Attack Officer. Passengers will use the VHF-FM radio (if available) for communications. Passengers will announce their own call sign in conjunction with the aircraft identification when using the radio (i.e. FT12 / F-ABC). Crew names or fire numbers will be used for these individuals.

The only exception to this policy occurs when working a wildland fire within controlled airspace of a local airport. **Aircraft operations** carried out within these areas will be conducted in conjunction with the local controller. **Fire operations** remain the same as areas out of controlled airspace.

Helicopter:	100-500 ft. (30-150 m) AGL
Birddog Aircraft:	100-1000 ft. (30-305 m) AGL
Orbiting Air Tankers:	1500-3000 ft. (457-914 m)
Air Tactical Group Supervisor: (formerly Air Attack Boss)	4000-5000 ft. (1220 – 1524 m) AGL
Others:	Over 5000 ft. (1524 m) AGL until cleared to another altitude by the airspace controller.



1. Flight Priorities

Flight priorities will be adjusted at the discretion of the airspace controller to suit existing conditions. Normally, the flight priorities are assigned according to fire behavior and necessity (i.e., multi-lightning starts). The following guidelines are used to assign the aircraft flight priorities as listed in order below:

1. Human emergencies;
2. Air Tankers;
3. Helicopters (bucketing);
4. Service; and
5. Reconnaissance.

E. NOTAMS

601.15 Forest Fire Aircraft Operating Restrictions

No person shall operate an aircraft:

(*a*) over a forest fire area, or over any area that is located within five nautical miles of a forest fire area, at an altitude of less than 3,000 feet AGL; or

(*b*) in any airspace that is described in a NOTAM issued pursuant to Section 601.16

601.16 Issuance of NOTAM for Forest Fire Aircraft Operating Restrictions

The Minister may issue a NOTAM that relates to restrictions on the operation of aircraft in the case of a forest fire and that describes:

(*a*) the location and dimensions of the forest fire area; and

(*b*) the airspace in which forest fire control operations are being conducted

601.17 Exceptions

Section 601.15 does not apply to:

(a) persons who are operating an aircraft at the request of an appropriate fire control authority; and

(b) Department of Transport personnel who are operating an aircraft in the performance of duties related to surveillance and the enforcement of aviation legislation.

F. AIRCRAFT MANAGEMENT/SUPERVISION

For the purpose of this manual, Department personnel are defined as:

a) Employees of the GNWT; AND

b) Department contractors and/or individuals whose duties require them to use Rotary Wing and Fixed Wing aircraft for transport or who are involved in loading or unloading such aircraft.

1. A Department employee will be assigned the responsibility of on-site aircraft management and/or supervision when:

   (a) more than one aircraft is assigned to a Project or Region/District;

   (b) medium size helicopters or larger (greater than a six passenger capacity) are assigned to a Project or Region/District; or

   (c) helicopters are being used to bucket water or fire retardants, or in slinging operations.

2. All persons involved in aircraft operations will be given adequate instructions, including safety procedures, before operations commence.

3. Regular air crew briefing and debriefing will be conducted by ENR staff prior to and at termination of activities involving aircraft utilization.

4. It is the responsibility of the aircraft user to ensure the information on the flight ticket/loadsheet is accurate and factual and will validate the flight ticket/loadsheet by his or her signature.

G. AIRTANKER AND AIR TANKER BASE OPERATIONS

1. Air Tanker / Air Attack and Tanker Base operations are the responsibility of the Forest Management Division. Aircraft and associated support staff will be positioned at Inter-Region by fire load, hazard, and risk. Once positioned at a base, Inter-Region/Inter-District dispatches can be made directly to the group as required.

2. All contact with an Air Tanker group will be via the Air Attack Officer in charge of that group only.

3. All requests for Air Tankers, located/positioned outside the Region/District boundaries must be channeled through the Forest Management Division (Territorial Duty Officer) who will be responsible for actioning or denying the request.

4. Once an Air Tanker group has been dispatched by the Forest Management Division (Territorial Duty Officer) to a target, or base changed to another Region, it may only be cancelled or rerouted by the Forest Management Division (Territorial Duty Officer).

5. When the Air Attack Officer and Air Tanker aircraft are over a wildland fire and no ground authority (i.e. Incident Commander) is present, the Air Attack Officer is the Incident Commander until their departure or an appointed Incident Commander assumes the role.

6. The Air Attack Officer is responsible for the safe operations of the Air Tanker group and as such may remove the group from any wildland fire he or she deems hazardous to life or property, both to ground and/or aircraft crews.

7. As Air Tankers are primarily an initial attack tool, initial attack on new wildland fires shall take priority over support action on an ongoing fire with the exception where life or property may be at stake.

8. Air Tanker Group Alert System - Alerts for various tanker groups will be set by the Territorial Duty Officer with input from the Region and District offices. Local Region and District Officers may **upgrade** an individual alert to increase preparedness while undertaking smoke patrols, possible smoke patrols, and unforeseen thunder shower/lightning activity. However, a local Region or District cannot lower the established alert without the approval of the Territorial Duty Officer.

   Resource Alert System – The Alert Status for all resources within each Region/District will be set by respective Regional Duty Officer with the exception of Air Tanker Groups. All resource alerts will be established by the respective Regional Duty Officer after careful analysis of the most current:

   ⇒ Lightning Activity Preparedness Planning System (LAPPS)
   ⇒ Preparedness Forecast; and
   ⇒ Fire Weather Forecast.

ALERT STANDARDS are as follows:

(a) **Red** Designated personnel, aircraft, and equipment ready for immediate dispatch.

(b) **Yellow** Designates personnel, aircraft, and equipment ready for dispatch within thirty (30) minutes of call out.

(c) **Blue** Designated personnel, aircraft, and equipment ready for dispatch within a predetermined time greater than sixty (60) minutes.

(d) **Green** Designated personnel, aircraft, and equipment are stood down usually for a predetermined period of time.

H. AIRCRAFT SAFETY

1. Unserviceable Radio Equipment
All aircraft employed on fire operations will have operative radio equipment capable of communication with other aircraft, ground crews, and Department base facilities (VHF-AM, VHF-FM). No aircraft will be allowed on operations without radio communications. Chartered aircraft without acceptable or serviceable radios will be considered unserviceable.

2. Unserviceable Emergency Locator Transmitter (ELT)
All aircraft must be equipped with a **serviceable** 406 MHZ Emergency Locator Transmitter (ELT). An unserviceable ELT will render the aircraft unserviceable for operational use.

3. Overload of Aircraft
Load Calculations will be completed before each loaded Initial Attack Operation for rotary wing and before each loaded dispatch for fixed wing transport. Under no circumstances will Department staff or aircrews overload an aircraft. The pilot or a responsible aircraft company representative must be in attendance for loading of the aircraft for safety reasons.

4. Refueling

(a) Department personnel **WILL NOT** refuel aircraft.

(b) During refueling operations, Department personnel will vacate the aircraft until the refueling has been completed.

(c) Hot refueling of rotary wing aircraft **WILL NOT** be allowed at any Department of Environment and Natural Resources operated heliport facility. Department personnel are NOT to be involved in **any way** in hot refueling operations away from an Environment and Natural Resources' facility.

(d) Aircrews must ensure there is proper grounding and bonding of refueling equipment.

(e) Pilots may refuse refueling aircraft from any storage facility. Including unsealed, improperly sealed, or aged drums. The Department **WILL NOT** use fuel that is more than 12 months past the fill or recertification date.

5. Pre-Job Briefing
All persons involved in aircraft operations will be given adequate instructions, including safety procedures prior to commencement of operations (See Appendix #9).

6. Flying in Helicopter during Bucketing /Slinging/Drip Torch Operations
Department personnel will NOT fly in helicopters being used in a bucketing role, slinging operations, and/or using incendiary devices such as flying a drip torch or A.I.D. machines.

7. Hover Exit Operations: **CARS 602.25 Entering or Leaving Aircraft in Flight**
CARS 702.19 Entering or Leaving a Helicopter in Flight

602.25 Entering or Leaving an Aircraft in Flight

(1) No person shall enter or leave an aircraft in flight except with the permission of the pilot-in-command of the aircraft.

(2) No pilot-in-command of an aircraft shall permit a person to enter or leave the aircraft during flight unless:

(a) the person leaves for the purpose of making a parachute descent; or

(b) the flight is authorized under Subpart 3, or the entering or leaving is permitted in accordance with Section 702.19.

702.19 Entering or Leaving a Helicopter in Flight

For the purposes of paragraph 602.25 (2) (b), the pilot-in-command of a helicopter may permit a person to enter or leave the helicopter in flight:

(a) where:
(i) the helicopter is operated at a low hover;
(ii) the person is able to enter directly from or alight onto the supporting surface;
(iii) the air operator is authorized to do so in its air operator certificate; and
(iv) the air operator complies with the *Commercial Air Service Standards*.

NO EMPLANING: Department employees **WILL NOT** emplane a helicopter while in a hover unless it is considered an emergency. The Department will consider emplaning a helicopter to be an emergency procedure, used only to evacuate employees that are in immediate danger. Helicopter emplaning will be considered an aircraft incident and will be reported as such.

Deplaning will only be conducted by trained personnel engaged in forest fire suppression or specialized wildlife work who have received Department training. Department personnel must receive training *every* season **BEFORE** hover exiting.

Deplaning from Hover can be done only during day VFR conditions while the helicopter maintains a stabilized hover with a **maximum skid height of FIVE feet above the ground**.

PROCEDURES FOR HOVER EXITING ARE SET OUT IN THE DEPARTMENT'S HOVER EXIT MANUAL.

8. Air Crew and Aircraft Considerations

To ensure safety is not compromised by factors contributing to pilot fatigue, the following guidelines will be followed provided they do not exceed the flight time limitations or flight duty time limitations and rest periods as specified in the Air Carriers' Operations Specifications or Flight Operations Manual.

Environment and Natural Resources (ENR) Directorate has determined that the guidelines below apply to all flying. **The Superintendent or appropriate Director may approve exceptions in accordance with the guidelines below. To be clearer, exceptions are caused by events, i.e. emergency and are not planned.**
These approved exceptions require a detailed explanation written on the applicable flight ticket by the ENR representative.

a. **Flight Duty Day:** Aircrews working for the Department will be limited to fourteen (14) hours of duty time in any one-day (24 consecutive hour period).

b. **FLIGHT TIME: Air crews working for the Department will NOT fly more than eight (8) hours in any 24 hour period (8 hours per day). The EIGHT-hour maximum daily flight time will also include any non-Departmental flying. If a pilot flies for another customer, the EIGHT-hour limit shall be reduced accordingly.**

For example: **If a pilot flies two (2) hours on another job, he/she will only be allowed to fly six (6) hours for the Department during that 24 hour period.**

c. **Exceptions:** When, in extenuating circumstances, a need exists to exceed the flight time and flight duty time limitations and rest periods as specified in the Commercial Air Service Standards, it will be the pilot-in-command / Air Operators' responsibility to ensure that the necessary authorizations are obtained.

d. **Rest Periods:** For every four (4) hours of flying time; pilots must have a half-hour rest period **AWAY** from the aircraft. This half-hour does **NOT** include aircraft maintenance or refueling time.

e. **Maintenance:** Maintenance is an essential function for the safe operation of all aircraft. Maintenance requirements vary greatly depending on aircraft type and operator requirements. To ensure safety is not compromised by lack of, or the inability to perform maintenance adequately, engineers are not to be separated from their aircraft for any period longer than 24 consecutive hours. When, in extenuating circumstances, a need exists to exceed these limits, it is the responsibility of the user to advise the pilot, engineer, and Regional Superintendent/Director, Forest Management before the limits are exceeded. The Regional Superintendent/Director, Forest Management may extend these limits only after all factors contributing to aircraft safety have been considered and agreement reached with the aircrew concerned.

Food and Lodging: It is the responsibility of all Department staff involved in aircraft operations to ensure the aircrew is provided with adequate accommodations and nutrition. Accommodation for air crews should not be shared with other personnel, only with the aircraft company's crewmembers, or where required with other aircrew. Every effort is to be made to provide or locate aircrew accommodations that ensure an atmosphere conductive for sleep and relaxation. (Note: Aircrews, especially engineers' hours of work may differ from those of the general work place.)

The air crew will be expected to camp out at field locations and will require their own sleeping bags and other accessories (cot/foam mattress, toiletries etc.). Accommodations will be suitable for the site and season. Air crew are expected to have in their possession adequate personal effects (sleeping bags, pillow, toiletries, medication, foam mattress etc.) to work from remote locations. The Department will supply air crew with portable sleeping cots and accommodations, this shall be suitable accommodations. This means a single occupancy bedroom that is subject to a minimal level of noise, is well ventilated and has facilities to control the levels of temperature and light or, where such a bedroom is not available, an accommodation that is suitable for the site and season, is subject to a minimal level of noise and provides adequate comfort and protection from the elements as outlined in Canadian Air Regulations.

f. **Rotations From Remote Bases:** The positioning of air crews at remote Fire Attack Bases, Base Camps, Staging Areas or Work Projects will only be for a short duration, with a minimum 3 to 5 days before rotated out to a regional center or closest community where commercial accommodations are provided. Determination of the application for this rotation will be based upon the Regional Duty Officer's evaluation of the following factors:

i) requirement of aircraft on site;
ii) status of air crew fatigue and morale factors;
iii) living conditions and facilities on site; and
iv) location and availability of alternate resource.

These limitations are guidelines and may vary depending upon the situation. Aircrews rotated out from a remote base must be relocated to a community or base location with access to the following services and facilities:

i) electrical and washing facilities for aircraft maintenance;
ii) secure storage for aircraft equipment and spares;
iii) commercial transportation for movement of spares and air crew personnel;
iv) commercial or Department accommodation complete with beds, showers and telephone access; and
v) laundry and incidental services.

The rotation period should NOT be LESS than 36 hours.

9. Accident Definition

All **accidents** involving Departmental use of aircraft will be reported immediately in a confidential manner to the Director, Forest Management and the Manager, Aviation Services.

An accident is an occurrence in which a person suffers injury or death and/or an aircraft is damaged.

SEE THE DEPARTMENT'S **AIRCRAFT ACCIDENT RESPONSE MANUAL** FOR FURTHER INFORMATION REGARDING AIRCRAFT ACCIDENTS, AS WELL AS MISSING OR OVERDUE AIRCRAFT.

10. Incident Definition

All **incidents** involving Departmental use of aircraft will be reported immediately in a confidential manner to the Director, Forest Management and the Manager, Aviation Services.

An incident means an aviation occurrence, other than an accident, that affects or could affect the safe operation of an aircraft.

Some examples of incidents are:

⇒ any illuminated warning lights at any time (chip lights etc.);
⇒ any aborted take-offs;
⇒ any problems with landings (flapless landings, etc.);
⇒ dropping a load during slinging operations;
⇒ unsecured items at landing sites including debris;
⇒ low fuel problems;
⇒ weather related problems;
⇒ helipad construction problems;
⇒ fuel pump failure;
⇒ engine starting problems;
⇒ unauthorized hover exiting;
⇒ loading/weight problems;
⇒ where an object comes in contact with an aircraft where contact was not intended or is detrimental to the aircraft;
⇒ an deviation from standard operating procedures; or
⇒ dangerous goods unlawfully transported.

The above are just a few examples of incidents that must be reported for the following reasons:

⇒ to monitor aircrew and passenger safety;
⇒ to monitor pilot fatigue;
⇒ to monitor individual aircraft capabilities;
⇒ to monitor various aircraft components (i.e., if several incidents were reported on the dropping of water buckets, perhaps it might be a malfunction with the hook);
⇒ to detect any patterns or trends in the incidents and then take a preventative course of action (this was one of the reasons for developing the Hover Exit Procedure Manual);
⇒ to explain delays in departures/arrival; or
⇒ to identify what the Department needs to improve.

SHELL ANALYSIS

A Shell Analysis report is to be ***completed by the air crew*** involved in the incident. (An incident report is to be ***completed by the ENR personnel*** involved in the incident).

IDENTIFY UNACCEPTABLE RISKS AND HAZARDS: PRIORITIZE AND REDUCE OR ELIMINATE THEM.

The Shell Analysis is made up of five (5) categories that are to be reported to the Aviation Services section for any aircraft incident.

The five (5) categories are:

SOFTWARE: *POLICY, REGULATIONS, MANUALS, PROCEDURES, PAMPHLETS, POSTERS, CHARTS, MAPS...*

HARDWARE: *AIRCRAFT - TYPE, CONDITION, A/C SYSTEMS, AUXILIARY EQUIPMENT, FUELLING AND LOADING SYSTEMS, INSTRUMENTATION, COMMUNICATIONS EQUIPMENT...*

ENVIRONMENT: *WEATHER, WORK AREA CONDITIONS, TIME FACTORS, TERRAIN, VISIBILITY, DAYLIGHT, TYPE OF FLYING - REMOTE, PRODUCTION...*

LIVEWARE (OTHER PEOPLE): *THE PEOPLE WHO INTERACT WITH THE PILOT AND WHO HAVE THE OPPORTUNITY TO INFLUENCE THE PILOT...*

LIVEWARE (PILOT/AIRCREW): *PERSONALITY (HUMAN FACTORS), PRESSURES, TRAINING AND EXPERIENCE, FATIGUE (FLIGHT HOURS/DUTY DAYS, REST, and MEALS), BRIEFING AND PREPARATION...*

The following pages contain an example of an Incident Report and the accompanying Shell Analysis.

The following is an example of a completed Aircraft Incident Report. This report to be ***completed by the ENR personnel*** involved in the incident.

Northwest Territories

AIRCRAFT INCIDENT / OCCURRENCE REPORT

a) Date and time of incident/occurrence: **June 24, 2014 at 1030 hrs.**

b) Name of carrier: **XYZ Helicopters Ltd.**

c) Name of pilot: **Joe Pilot**

d) Type of aircraft: **Astar 350B2**

e) A/C registration: **C-GOLF**

f) A/C assigned to: **Hay River Duty Officer – John Smith**

g) Function of aircraft: **Mountain Pine Beetle bait traps**

h) Purchase order number: **123710**

i) Routing of aircraft: **YHY – Cameron Hills - YHY**

j) Location of Incident/Occurrence: **Cameron Hills**

k) Passenger Name(s): **Sam Black, Jane Jones**

l) Nature of Incident/Occurrence: **The aircraft was required to land on the cutlines as these were the only suitable landing areas. Hover exits were not intended and both the pilot and the passengers were instructed that hover exits would not be permitted. The pilot took the necessary precautions before landing to ensure the landing site was suitable. As well, the passengers were watching nearby trees to ensure clearance was adequate. The pilot adjusted the aircraft slightly to his right just before touchdown and the machine went a little too far to the right and the end tip of the main rotor clipped a black spruce tree, hitting the bark of the tree. Nothing was felt during the landing but after shutting down a portion of bark was noticed missing from a tree and the tie down strap at the end of the rotor blade was bent from the impact. Another aircraft was ferried in to return the passengers to Hay River. The pilot tested the blades by hovering and the machine operated normally, whereas it ferried to the highway where engineers determined there was no damage to the rotor blade and the tie down clips could be repaired with little effort.**

Reported by: Sam Black Date: 24/06/14 (dd/mm/yy) Time: 18:30 (24 hr)

SHELL ANALYSIS ATTACHED: ☒

The following is an example of a completed Shell Analysis. This report to be ***completed by the air crew*** involved in the incident.

SHELL ANALYSIS

Please fill-in all the fields below and submit to: **Aviation Services: Fax: (867) 872-2148 or Email to: Aviation@gov.nt.ca**

Aircraft Registration: **C-GOLF** Date of Incident: **June 24, 2014**

Software: All aspects of XYZ Helicopters Ltd. flight operations are covered in the class, referenced, or experienced in flight during the training period.

In the classroom, general discussion is encouraged and varies from class to class. Annual incidents and accidents are de-sensitized and discussed along with TC CADORS with all classes.

Specifically, confined areas and situational awareness are dealt with during the "flight" phase of the training. Certain aspects of these items would be discussed, if they were noted, as incidents/accidents in the previous year as a weak area operationally.

All helicopter pilots receive confined area theory and practical training constantly from the start of their career. It is one of the most experienced aspects of a bush pilot's job. It is also one of those high risk aspects of the job.

I would venture to say that as long as we are dealing with humans and mother nature we will not eliminate this risk. We are constantly modifying our recurrent training programs to mitigate this and other risks of the job.

Hardware: From the pilot's line of sight or view, in this particular aircraft, the pilot does not have 360 degree visibility to see all external physical hazards. The helicopter AS350 BA was equipped and met the standards of the contract.

Environment: Two environments here; the internal environment in the aircraft between passenger and pilot and the external physical environment (the landing zone). Lots of human factors happening within the internal environment. The external environment (landing zone) could have been modified by physically making it larger or by choosing another landing area. The landing zone should be preplanned and approved in advance of utilization. It is assumed that the traps would be monitored and the helicopter would have to land again at least once again at this site.
The weather conditions on June 24 were excellent. The pilot was requested to land on the Cameron Hills, which is an area that is difficult to find a landing area. The pilot found a cutline and circled 3 times before deciding to land.

The pilot felt the area was large enough to accommodate the helicopter. He hovered over the site and checked the left side clearance. The pilot inadvertently moved the helicopter too far right and the main rotor blades hit a Black Spruce tree.
He moved the helicopter a little to the left and landed. He then observed that the tree bark had been skinned and the main rotor blades were bent.

Liveware: *(Other People)*

The pilot's decision to accept the landing area could have been influenced by a natural desire to please the customer and carry out their request.

Liveware: *(Pilot/Aircrew)*

The pilot is a very experienced pilot and has worked in many different geographical areas. He has had annual recurrent flight training every year during his career. He felt there was no question of fatigue because the air crew has excellent accommodations and meals. He also felt flight hours and duty days were not a factor. There has never been any pressure from ENR in his role as the pilot. The customer was briefed on the day of the occurrence and the usual preparations were made for the job that day. He had accumulated 80 hours of flight time so far this year.

Observations and recommendations:

It is well known that it can be difficult to find a proper safe landing area below the tree line. Initial attack crews have one power saw operator on board which allows a hover exit. The power saw operator exits and cuts out a pad suitable for the landing.
Trap landing sites and other project sites should possibly be treated the same way. Especially if the landing site is going to be used time and time again.
It would be prudent to have these project sites preplanned, prepared and approved prior to the project start.

Completed by: Joe Pilot Date: 30/06/14 (dd/mm/yy)

The Shell Analysis Report to be completed by the aircrew involved in the incident.

I. PILOT RESPONSIBILITY

i) Ensure the aircraft is fuelled, serviceable, and available for dispatch in accordance with the Regional/Territorial Alert Standards.

ii) Advises the local ENR authority of any deficiencies or problems in the operation.

iii) Records all flight times and crew expenses on the appropriate flight documents.

iv) Ensures all flight tickets/loadsheets are certified by a designated Department employee.

v) Conducts operational checks of all navigational, safety, communications, and cargo/water dropping systems prior to alert time.

vi) May assist in training of fire crews, wildlife crews and resource staff in the safe and efficient use of helicopters.

vii) Keeps the current dispatch authority of their whereabouts at all times, while on contract with the GNWT.

viii) Ensures that all routine checks and maintenance are scheduled and carried out in accordance with current regulations and specifications.

ix) Ensures that the aircraft is kept reasonably clean and ready for missions as and when required.

x) Maintains flight operations in accordance with the NWT's Flight/Duty Time and Rest Period Regulations and Limits.

xi) Advising if relief pilot is required due to fatigue.

xii) Being prepared to remain over night at camps (i.e. sleeping bag, foamie, air mattress and other camping accessories).

xiii) It is the pilot's sole responsibility as to whether it is safe to land or takeoff. The pilot must **ALWAYS** make his or her determination on the side of safety first!

xiv) Directs the loading and/or off-loading of the aircraft. Aircraft will not be overloaded.

J. MANIFESTING

The pilot-in-command shall ensure that a manifest of all crewmembers and passengers on board has been completed. A copy of this manifest shall remain at the point of initial departure. Manifest changes will be left at subsequent points of departure when practical. In those instances where multiple short flights will be made in a specific geographical area, which involves frequent changes of passengers, a single manifest of all passengers involved may be left with an appropriate person to preclude unreasonable administrative burden.

However, the Department will also maintain a passenger manifest. Each crewmember, contractor, and Departmental staff will be assigned a number by their respective Regional Office. This number will be utilized instead of first and last names. Each Regional Office will maintain a master list of all their personnel with their assigned numbers. In a case of an Inter-Regional dispatch, this list will be forwarded to the applicable Region. It will be the responsibility of an assigned Departmental Representative (Crew Leader/Radio Operator) to ensure that a manifest is recorded for each flight. In instances, which involve frequent changes of passengers, this manifest **MUST** be updated. This manifest must be relayed to an appropriate Departmental Representative on the ground (Radio Operator at a Base Camp/Regional Office/Fire Camp).

K. WEATHER

Aviation weather is available from Flight Service stations in: Fort Smith, Yellowknife, Hay River, Fort Simpson, Norman Wells, and Inuvik. In addition to this, complete coverage and forecasts will be available from the Forest Management Division (867-872-7700) and at Regional Offices on a daily basis during the summer months.

L. GOVERNMENT VEHICLE POLICY

All Government vehicles, whether owned or rented by the Department, are restricted to use on Government business. Government vehicles may ONLY be operated (driven) by Government employees due to insurance restrictions. The Department disclaims any responsibility in cases of any accident where the driver was not carrying out business for the Department.

M. ALCOHOL AND DRUGS

The possession and/or consumption of alcoholic beverages and drugs in any aircraft, vehicle, or on any premise owned, occupied, or under the control of the Department is strictly prohibited. As ENR Camps and Fire Attack Bases are classified as Departmental premises, this policy will apply to all locations. All personnel under employment, contract, or on hire to the Department will be made aware of this policy and adhere to it.

N. AIR CHARTER PURCHASE ORDERS

The Air Charter Purchase Orders are formal agreements between the Department of Environment and Natural Resources and the Air Carrier.

When do short-term contracts start?

If a helicopter is hired from the location it is presently located and *ferry time is agreed upon by the Department,* then the *contract starts the "minute" the helicopter leaves in order to ferry to or within the NWT.*

This information can be obtained from the Air Charter Purchase Order under the section "Point of Hire".

If the helicopter company has a machine located elsewhere (Point A) but tells us they will be positioned at some other point (Point B) within the NWT or some closer point, and we agree to hire them if they arrive at Point B by a certain time, then the contract will start only when the helicopter arrives (and is ready to work) at Point B.

Note: If the helicopter arrived at Point B very late in the day, which would not allow flight minimums to be flown off, **then the contract would start the following morning OR there would be no flight minimums for that day.**

Also see "Point of Hire" on the Air Charter Purchase Order.

On the Air Charter Purchase Order see **"Point of Release"** to determine what locations we will pay ferry time to when the helicopter is released at the end of the contract.

An example of an Air Charter Purchase Order is on the next page.

TERMINATION OF THE CONTRACT MAY RESULT FROM THE FOLLOWING SITUATIONS *(also see current Standing Offer Agreement (SOA) for aircraft services):*

1. Non-compliance with Transport Canada regulations;
2. Prolonged unserviceablilty of aircraft;
3. Aircrew is either insufficiently experienced or incompatible with the Department's management team;
4. Unserviceable radios/ELT;
5. Failure to carry out reasonable orders from authorities in charge or by mutual agreement;
6. The aircraft fails to perform according to the manufacturer's specifications; or
7. Failure to operate the aircraft within the normal safety guidelines that are acceptable within the Resource Management Industry.

SAMPLE AIR CHARTER PURCHASE ORDER

PURCHASE ORDER - CH-123610

(This report was generated on 01/Mar/2013 at 11:26)

Northwest Territories Environment and Natural Resources

TO:	**No Name Air Ltd.**	INVOICE TO:	**Environment and Natural Resources**
	PO Box 1, Fort Simpson, Northwest Territories, X0E 0N0, Canada		PO Box 7, 149 MacDougal Rd, Fort Smith, Northwest Territories, X0E 0P0, Canada
Vendor ID No.:	0001001000	S.O.A. No.:	40001
		Order Date:	02/Mar/2013

Region/Division:	ENR-HQ-Aviation	Engineer:	
Aircraft Registration:	GGEE	Point of Hire:	NORMAN WELLS
Aircraft Type:	206-(Cessna)	Point of Release:	NORMAN WELLS
Special Equipment:		☐ Crew Expense at Point of Hire	
Aircraft Assigned To Name:	Jane Biologist	☐ Crew Expense at Other Locations	
Aircraft Assigned To Phone:	(867)587-3510	☐ Ferry To and From Point of Hire	
Aircraft Assigned To Alt. Phone:		☐ Hover Exit Approved	
Pilot:	Gordon, Bob		
Co-Pilot:			

Purpose: Aerial reconnaissance survey of BWH barren ground caribou below treeline in Sahtu.
Routing three daily trips from Norman Wells to follow survey lines between Great Bear Lake, treeline, Inuvialuit /Sahtu border and Mackenzie River as per emailed map.Company to have jerry cans of fuel on board for refuelling at Ft Good Hope.
ENR-HQ's budget
Comments: Three passengers including One ENR Biologist and two Norman Wells observers.Variable low level flying to allow observation of wildlife and tracks. End points of survey lines to be provided to pilot as per emailed map. We will not be landing at Colville. We will veer off transect to avoid Colville by 50km then resume transect flying. Based from Norman Wells we will go to Fort Good Hope to pick up observer(s) before the survey and drop the observer off at Ft Good Hope each day.

PERIODS OF HIRE

02/Mar/2013 - 05/Mar/2013

Departure:	NORMAN WELLS	Time: 09:00	Arrival:		Time:

Routing Information

Start Location	End Location	Passengers	Cargo	Weight	Unit

COST

Number of Days: 4 Total Guaranteed Hours: 0

Daily Minimum: 0.00 Hours

Costing Details

Commodity	Unit	Rate	Quantity of Unit	Days	Total	Comments
Flight Service	Hours	$1.00	30.00	1	$30.00	
AC Company Fuel	Hours	$1.00	30.00	1	$30.00	
Other	None	$1.00	1.00	1	$1.00	ferry costs incl fuel, nav can & landing fees
Other	Estimate	$1.00	1.00	4	$4.00	est. crew expense AFHB
				Calculated Total:	$65.00	

ESTIMATED COST

Org	Account	Fund	Area	Sett	Program	PC Bus	Project	Activity	Amount
53018	53485	01	11	005	55130				$100.00
								Estimated Total:	$100.00

We certify that the goods being purchased by the GNWT are being purchased with Crown funds and therefore not subject to the Goods and Services Tax.

The terms and conditions of the standing offer agreement (SOA) shall apply whenever the SOA number appears on the face of the purchase order.

CERTIFIED PURSUANT TO SUBSECTION 44(1)(A) OR 49(2)(A) OF THE FINANCIAL ADMINISTRATION ACT

SPENDING AUTHORITY AUTH NO.

Page 1 of 1

O. FLIGHT TICKETS & AIRCRAFT LOADSHEET/TRIP LOGS

Flight tickets and the Aircraft Loadsheet/Trip Log must be filled out daily. A flight ticket is still required if no flying is done, a loadsheet is not necessary. Note on the flight ticket the reason no flying was done. If the aircraft is unserviceable, enter the start time as well as the time the aircraft becomes serviceable. Flight tickets and Loadsheet/Trip Logs (white and yellow copies) are to be submitted at the end of each day and verified correct and complete by the Officer in charge, preferably the Duty Officer. This procedure is important to ensure our daily expenditures are current.

Should an air carrier provide a substitute aircraft due to unserviceablilty, it must be indicated on the Loadsheet/Trip Log and the accumulative hour totals must be carried on until the original aircraft is back on line.

HOW TO COMPLETE EACH SECTION OF THE AIRCRAFT LOADSHEET/TRIP LOG

Section One – Aircraft Information

Flight Date _____ enter the date the flight occurs

Aircraft Company _____ enter the full company name of the Aircraft Company

Aircraft Registration _____ enter the last four letters of the current aircraft registration

Aircraft Type _____ enter the model and type

Flight Ticket No. _____ enter the "Aircraft Company's" flight ticket number

Contract No. _____ enter the air charter purchase order (PO) number (i.e. CH 169810) or the long-term contract number

Pilot / Engineer _____ enter the first and last names of the Pilot and/or Engineer

Section Two –Flight Information

Departure Location _____ record the location of takeoff (i.e. Fire #, Base Camp, Tower, Settlement, etc.)

Departure Time _____ record the time of the takeoff using the 24-hour clock

Arrival Location _____ record the location of landing (i.e. Fire #, Base Camp, Tower, Settlement, etc.)

Arrival Time _____ record the time of the landing using the 24-hour clock

Passengers (number) _____ record the number of passengers on each flight

Cargo – or – # of Drops record what type of cargo **OR** the number of drops of water made when bucketing

Fire # / Project Fire # - if working on a fire, record the fire number
Project – if working on a project, the ENR Officer will enter the project code.

Flight Code enter the Aircraft Flight Purpose code for each flight.
(see Appendix #1)

Section Three – Flight Time

Rotary Wing enter the total time from the moment the helicopter first moves under its own power for the purpose of taking off until the moment it comes to rest at the end of the flight (or in other words, from the time the helicopter commences hovering until it ceases to hover after landing).

When operations involve a continuous succession of flights, each **LESS** than ten minutes duration **AND** the engine is **NOT** shut down between such flights, flying time shall be computed from the time the helicopter commences to hover for the first flight until the helicopter ceases to hover after the final landing.

This flight time should be recorded to the nearest six minutes using the decimal system in Appendix 3.

Fixed Wing (excluding Air Tankers) This flight time **MUST** be entered in **MILES** for all point-to-point flights where flight distances are measurable.

The flight time will **ONLY** be entered by the **HOUR IF** engaged in operations involving flights or parts thereof where flight distances are **NOT** measurable, such as reconnaissance flights or detection patrols. The flight time for fixed wing aircraft where the distances are **NOT** measurable will be the total time from the moment the aircraft first moves under its own power for the purpose of taking off until the moment it comes to rest at the end of the flight.

When applicable, flight time should be recorded to the nearest six minutes using the decimal system in Appendix 3.

Section Four – **Remarks**

Remarks _____ enter any **new fires discovered** and any additional information or explanations of the flight. When transporting fuel drums, enter the number of drums and whether they are empty or full.

Section Five – **Hours**

Total Hours Flown Today _____ enter the total of **ALL** flight time for the day

Previous Accumulated Hours _____ enter the total of ALL previous hours flown for the contract

Total Accumulated Hours to Date __ enter the total hours flown to date

Section Six – **Fuel Obtained**

This section is to record the amount of **DEPARTMENT (ENR) FUEL ONLY** by location and number of drums or litres. For drummed fuel, note the **date** and **batch number** of the fuel. This procedure is required to keep our fuel inventory records up-to-date.

INCLUDE THE BATCH NUMBER OF THE DEPARTMENT'S DRUMMED FUEL ON THE DEPARTMENT'S LOADSHEET/TRIP LOG.

Note: **AIRCRAFT COMPANY FUEL**, fuel the company pays for themselves, should be indicated on **COMPANY** flight tickets **ONLY**!

Failure to record Company Fuel Charges on the COMPANY flight ticket will result in non-payment.

Section Seven – **Crew Expenses**

Meals _____ check off all applicable meals that were **NOT** provided by the Department. Record the dollar amount of accommodations and transportation **(EXCLUDING GST)**. These are the expenses incurred for company payment.

*Failure to record expenses incurred in the Crew Expenses Section of the Loadsheet / Trip Log will result in **NO** reimbursement to the company*

Section Eight **– Expense Authorization**

This section **MUST BE** approved, signed and dated by the ENR Officer in charge.

> ***NO CHANGES*** *will be permitted on the Aircraft Loadsheet / Trip Log and Company Flight Tickets* ***AFTER*** *Certification. Changes made prior to certification must be initialed by the appropriate Authority.*

Persons certifying the Loadsheet / Trip Log and flight tickets should **CHECK ALL ENTRIES** to make sure they are correct before signing the documents. This includes verifying that claimed expenses were authorized and correct.

Note: Double check up and down times and conversions to hours system (see Appendix #3). These amounts MUST match the Flight Time Conversion Table. **Any discrepancies will be calculated to the lowest time entered by the Department.**

> *If the flight time for the day is over eight (8) hours (for which prior approval was given), a detailed explanation as to why must be written on the applicable flight ticket/loadsheet by the ENR representative.*

Northwest Territories

AIRCRAFT LOADSHEET/TRIP LOG

Page 1 of 1

Flight Date	Aircraft Company	
July 5, 2013	Fixed Wing Aviation Ltd.	
Aircraft Registration: C-GOLF	Aircraft Type: Cessna 185	Flight Ticket No.: 1348
Contract No.: 123610	Pilot: Jimmy Likestofly	Engineer:

Time Reported for Duty: **Time Released from Duty:**

	Departure		Arrival		Passengers (number)	Cargo - or # of Drops	Fire #/ Project	Flight Code	Flight Time Hours / Miles	Remarks
	Location	Time	Location	Time						
1.	YFS	14:31	YSM	17:06	1			WRO	336 Miles	Ferry flight - pick up Joe Biologist
2.	YSM	17:23	YSM	18:26	1			WRO	1.1 hrs	Caribou productivity survey
3.	YSM	18:19	YSM	19:31	1			WRO	1.2 hrs	Caribou productivity survey
4.	YSM	19:48	YFS	21:00	1			WRO	336 Miles	Ferry flight home to YFS
5.									---------	
6.									2.3 hrs +	(Where distance is not measurable, the usage must be calculated in HOURS.)
7.									672 miles	(Where the flight is Point A to Point B, the usage must be calculated in MILES.)
8.										
9.										
10.										
11.										
12.										
13.										
14.										
15.										

HOURS

Total Hours Flown Today:	672 miles/2.3 hrs
Previous Accumulated Hours:	---------
Total Accumulated Hours to Date:	---------

FUEL OBTAINED

Location	DRUMS: No.	Date of Fuel	Batch Number	Bulk - Litres
4-mile (ENR fuel)	1	May 2013	54326889	

CREW EXPENSES

MEALS:	Breakfast/Lunch/Dinner/Incidentals B	L	D	I	Hotel	Vehicle
Pilot:	☐	☐	☒	☐	$	$
Engineer:	☐	☐	☐	☐	$	

EXPENSE AUTHORIZATION

NOTE: Reimbursable expenses (GST excluded) are allowable only while away from home base and must NOT be for services provided by Department of Environment and Natural Resources.

X Joe Biologist's signature
Signature of ENR Representative

July 05/13
Date d/m/y

INCLUDE THE BATCH NUMBER OF THE DEPARTMENT'S FUEL ON LOADSHEET/TRIP LOG.

Northwest Territories

AIRCRAFT LOADSHEET/TRIP LOG

Page 1 of 1

Flight Date	Aircraft Company	
July 5, 2013	No Name Helicopters Ltd.	
Aircraft Registration	**Aircraft Type**	**Flight Ticket No.**
C-GDAD	Astar 350B2	56890
Contract No.	**Pilot**	**Engineer**
CH 123810	James Brown	Jane Wrench

Time Reported for Duty: / **Time Released from Duty:**

	Departure		Arrival		Passengers (number)	Cargo - or- # of Drops	Fire # / Project	Flight Code	Flight Time Hours / Miles	Remarks
	Location	Time	Location	Time						
1.	YZF	15:46	ZF014	17:00	3		ZF14	H	1.2 hrs	IA ZF14 w/Crew C
2.	ZF014	17:27	ZF014	17:46	3		ZF14	H	0.3 hrs	P/U crew @ base -->ZF014
3.	ZF014	18:00	ZF014	18:20	----	7	ZF14	E	0.3 hrs	Bucketing
4.	ZF014	18:30	YZF	19:43	----	1 drum	ZF14	H	1.2 hrs	Rtn w/drum, discovered ZF015, rtn ZF
5.									--------	
6.									3.0 hrs	
7.										
8.										
9.										
10.										
11.										
12.										
13.										
14.										
15.										

HOURS

Total Hours Flown Today:	3.0 hrs
Previous Accumulated Hours:	10.0 hrs
Total Accumulated Hours to Date:	13.0 hrs

FUEL OBTAINED

Location	DRUMS			Bulk - Litres
	No.	Date of Fuel	Batch Number	
ZF base (ENR fuel)	---	May 2013	A1-73-12	120 litres
Awry Lake (ENR fuel)	1	Apr 2013	124670278	------

CREW EXPENSES

MEALS:	Breakfast/Lunch/Dinner/Incidentals				Hotel	Vehicle
	B	L	D	I		
Pilot:	X	X	X	X	$ 150.00	$ 200.00
Engineer:	X	X	X	X	$ 150.00	

EXPENSE AUTHORIZATION

NOTE: Reimbursable expenses (GST excluded) are allowable only while away from home base and must NOT be for services provided by Department of Environment and Natural Resources.

X Duty Officer's signature — July 05/13

Signature of ENR Representative — Date d/m/y

INCLUDE THE BATCH NUMBER OF THE DEPARTMENT'S FUEL ON LOADSHEET/TRIP LOG

P. AIRCREW EXPENSES AND AIR CARRIER INVOICING

All aircraft crew must record their full daily expenses, meals, accommodations, and transportation, in the "Crew Expenses" section of EACH Aircraft Loadsheet/Trip Log. Each Aircraft Loadsheet/Trip Log must be approved and signed by a Department representative. Failure to indicate the total daily aircrew expenses on the Aircraft Loadsheet/Trip Log will result in NO reimbursement being made to the carrier.

THE GNWT CANNOT ACCEPT AND IS NOT LIABLE FOR THIRD PARTY BILLING. CREW EXPENSES, SUCH AS ACCOMODATIONS OR VEHICLE RENTALS CANNOT BE BILLED DIRECTLY TO THE GNWT.

Crew Expenses are reimbursable ONLY when indicated as such on the Air Charter Purchase Order. Generally, they are reimbursable if the aircrew is away from home base or point of hire.

Meals

Aircrews will be responsible for paying their own meals and the aircraft company will invoice the Department as per the current GNWT Duty Travel Rates (see Appendix #5) for each person on site. No receipts are necessary for meals.

Aircrews **MAY NOT** claim for meals, incidentals, or private accommodations while staying at GNWT facilities, satellite bases, or camps. Meals **CANNOT** be claimed if supplied by the GNWT.

Incidentals may only be claimed if the contractor overnights in a place other than his or her home base, AND they may also be claimed on the last day of any contract longer than one day, provided the crew has been away from their home base. Where the return trip is made in one day, the amount claimable shall be on the basis of meals only. **Incidentals CANNOT be claimed for a one-day trip.**

Depending on the time of day the aircraft is hired, some meals may not be claimed. For instance, on the first day of the contract, we expect not only the aircraft to be fuelled and ready to go but the pilot as well. Therefore, on **DAY 1** of the contract, **BREAKFAST WILL NOT BE CLAIMED.**

Claims cannot be made for meals when the aircrew is at their home base within a reasonable time frame (e.g. at home base by 16:30 hrs. -no claim for dinner can be made).

Reimbursement will NOT be provided when the DEPARTURE of the aircraft from home base or point of hire is:
- for breakfast, expenses are not eligible for reimbursement
- for lunch, later than 13:00 hours
- for dinner, later than 18:30 hours

Reimbursement will NOT be provided when the ARRIVAL of the aircraft at home base or point of release is:
- for breakfast, earlier than 07:30 hours;
- for lunch, earlier than 12:30 hours;
- for dinner, earlier than 18:30 hours

The Department will approve accommodation and/or meals for the following number of people (ppl) actually on the working site for the period the meals or accommodations are being charged for:

Helicopter Classes

Light Helicopters (Bell 206B, Hughes 500) – 2 ppl (1 pilot & 1 engineer)

Intermediate Helicopters (Bell 206L, Bell206L-1, Astar) – 2 ppl (1 pilot & 1 engineer)

Medium Helicopters (Bell 204, Bell 212) – 2 ppl (1 pilot & 1 engineer)

Heavy Helicopters (S-55, S-58) – 3 ppl (1 pilot, 1 crewman & 1 engineer)

Fixed Wing Aircraft

Single & Multi Engine, Light (C185, Beaver, Baron, C310, C337) – 1 ppl (1 pilot)

Single Engine, Medium (Single Otter) – 2 ppl (1 pilot & 1 crewman/engineer)

Multi Engine, Medium (Twin Otter) – 2 ppl (1 pilot & 1 crewman/engineer)

Air Tankers:

2 CL-215s and 1 Birddog Aircraft – 7 ppl (3 pilots, 2 co-pilots & 2 engineers)
1 Electra and 1 Birddog - 6 ppl (2 pilots, 1 co-pilot & 3 engineers) or
- 5 ppl (2 pilots, 1 co-pilot & 2 engineers)
1 DC-4 and 1 Birddog aircraft – 5 ppl (2 pilots, 1 co-pilot & 2 engineers)

Accommodations / Transportation

All aircrews are to use their proper names along with their **respective company name** when reserving and/or paying for accommodations and rental vehicles. **DO NOT use the GNWT** or the **Department's Name** as you are **NOT** employed by the Government of Northwest Territories.

Aircrews will be responsible for paying their own accommodations/transportation and must submit receipts to their company, so the aircraft company can submit the receipts (excluding the GST), along with respective flight tickets and invoice to the Department of Environment and Natural Resources.

In the event of a sudden Base change where the aircrew pays accommodations at two locations, an explanation must accompany the invoice and flight ticket.

Accommodations **CANNOT** be claimed for the **day the aircraft is released**. If unforeseen circumstances arise where accommodations are necessary for the date of release, an explanation must accompany the invoice and flight ticket.

Invoices for vehicle rentals, accommodations, and taxis **MUST BE** supported by a receipt with the applicable dates listed.

Aircrews must ensure that all accommodation/transportation charges are recorded on the appropriate flight ticket/aircraft loadsheet. Failure to comply with this guideline will result in NO reimbursement to the air carrier.

Fuel

All fuel is supplied by the Department, either by the GNWT owned fuel system or by the air carrier purchasing fuel and then invoicing the Department.

Rotary Wing Aircraft:

When a Rotary Wing Aircraft is hired, it is assumed that the aircraft is fuelled and ready to go. We **DO NOT** pay for fuel **AT** the Point-of-Hire. We do pay/or provide fuel for the ferry flight enroute to its base of operation **FROM** the Point-of-Hire. The Department will also pay/or provide fuel for the ferry flight from the base of operations to the Point-of-Release, and will top it up upon return to the Point-of-Release.

Fixed Wing Aircraft:

When a Fixed Wing Aircraft is hired, the fuel rate will be fixed on either a Mileage or Hourly Rate, along with any applicable surcharges supported by receipts.

Air Tanker Aircraft:

For Air Tankers, the aircraft will arrive on base at the beginning of the season with fuel to perform the first of the season's missions. This is defined as four (4) hours of fuel that the company would be responsible for. At the end of the season, the aircraft would be fuelled by the Department to the four (4) hour level prior to leaving the base.

Invoices for fuel purchased or supplied by the aircraft company must be supported by a receipt.

Any fuel purchased or supplied by the air carrier has to be shown on the appropriate flight ticket/ aircraft loadsheet. Failure to comply with this guideline will result in no reimbursement being made to the air carrier.

INCLUDE THE BATCH NUMBER OF THE DEPARTMENT'S FUEL ON THE DEPARTMENT'S LOADSHEET/TRIP LOG.

Crew Change

Air carrier initiated crew changes will be paid by the air carrier. Crew expenses related to such crew changes will be also be paid by the air carrier. Air crew changes requested by the GNWT will be paid by the GNWT with the exception of unsatisfactory aircrew performance.

The carrier must advise the Forest Management Division, Aviation Services' section of any crew changes **48 hours** in advance (see Appendix #15).

NO SUBSTITUTIONS FOR AIRCRAFT AND PILOTS WILL BE ACCEPTED WITHOUT PRIOR AUTHORIZATION FROM THE FOREST MANAGEMENT DIVISION, AVIATION SERVICES SECTION.

Daily Minimums

Aircraft hired on a casual basis, less than one day, **ARE NOT** compensated for daily minimums unless the aircraft is booked as such, or the accumulated waiting period charge exceeds the daily minimum.

Aircraft hired on a short-term basis, more than one day, the daily minimums are averaged.

If prior to termination an aircraft is extended, the daily minimums for the aircraft will be recalculated. This is based on the minimums that would have applied had the original air charter purchase order (PO) included the period of the extension. The daily minimums are cumulative over the life of the air charter purchase order, which includes all subsequent extensions.

For example: If the daily minimums for the charter are **4.0 hours a day** for the period of May 01 to May 05, the guaranteed hours would be 20 hours.
(5 days x 4 hrs/day = 20 hours).

If the Air Charter Purchase Order were extended for another two days, then the guaranteed hours would now be 28.

(5 days + 2 day extension x 4 hrs/day = 28 hours). The daily minimums are averaged.

In the event of an unserviceable or unavailable aircraft, the daily minimum hours **WILL NOT** be paid and no others charges or recoverable expenses, including crew expenses will be considered.

> **An aircraft will be considered to be unavailable or unserviceable during any 24 hour period commencing at 0700 hours, local time, when the aircraft cannot, due to mechanical failure of the said aircraft, inability of the crew to perform duties including but not limited to where the crew has exceeded statutory flight and duty time limitations, or failure of specialized equipment to complete contracted assignments. Unserviceable ELT, radio equipment, and accessories are to be considered as rendering the aircraft unserviceable for operational use.**

Other

Aircraft are normally released at a time of day that will allow depositioning to the Point-of-Release (as noted on the Air Charter Purchase Order) on the same day. Additional expenses will not be accepted or reimbursed should the aircrew or air carrier delay their departure and/or stay overnight, unless circumstances dictate or prior approval is given.

Air carriers are responsible for the transportation and costs of transportation for spare parts and special equipment that is required to service the aircraft, unless prior written approval has been given. The air carrier must ship all freight directly to the air crew whenever possible.

Fire Suppression activities are EXEMPT FROM NAV CANADA CHARGES. Note the instructions on the Purchase Order.

It is expected that all air carriers should deal with Northern Registered Companies for services such as vehicles or hotels as opposed to fellow company employees or private citizens.

Invoicing

Each company invoice should reference ONLY ONE Air Charter Purchase Order number (extensions included) and should state the correct Purchase Order number and aircraft registration.

The rates shown on the Air Charter Purchase Order reflect the rates provided through the Standing Offer Agreement (SOA) or Air Charter Request for Tender. These are the only rates considered for reimbursement.

Unused minimums should be shown as a separate item on the invoice.

The Goods and/or Services purchased by the Government of the Northwest Territories are being purchased with Crown Funds and are therefore not subject to the Goods and Services Tax (GST). **GST must be deducted from hotel bills, vehicle rentals, etc. that are submitted to the GNWT for reimbursement.**

Even though the Contractor will not charge G.S.T., the contractor may be eligible to receive input tax credits with respect to any G.S.T. liability incurred by the Contractor in providing the property and services if such a refund would be available in other circumstances.

It is the Government of the Northwest Territories' (GNWT) policy NOT TO PAY any invoice until it becomes due, therefore, we cannot receive any invoice in our office before services have been rendered.

It is **RECOMMENDED** that crew expenses be invoiced separately from the flight time charges to ensure there are no delays in your company receiving payment.

Invoices for crew expenses **must** be supported by receipts (except meals) and should be separated into individual days and by individual air charter purchase order numbers (extensions included).

When invoicing for ***Fixed Wing Aircraft*** (excluding Air Tankers), we will **ONLY** pay the **rate per mile** for all Point-to-Point flights where the distances are measurable, and we will pay the **rate per hour** for flights or parts thereof where the flight distances are **NOT** measurable, such as detection patrols or reconnaissance flights.

All invoices must be submitted to the Forest Management Division no more than thirty (30) calendar days after the final release date on any air charter purchase order or long-term contract. Send complete invoices to:

Forest Management Division
C/O Financial Shared Services
Government of the Northwest Territories
PO Box 1230, Fort Smith, NT X0E 0P0
Email: Financial_SharedServices@gov.nt.ca Attention: Forest Management

Invoices with errors may be returned with a letter of explanation for correction and resubmission. Should you require further information or clarification regarding invoice procedures, please contact the Forest Management Division, Aviation Services section at (867) 872-7700 or fax (867) 872-2148 or email Aviation@gov.nt.ca

SUMMARY OF AIRCRAFT FLIGHT PURPOSE CODES

AIRTANKER OPERATIONS

ATA	Fire Bombing ** (Tankers)
ATB	Birddogging for Fire Bombing** (Birddog Aircraft)
ATC	Base Change
ATD	Training Practice
ATE	Administration
ATF	Positioning Flights
ATG	Fire Standby
ATH	Other
ATI	False Alarm
XP_	Export

** Requires Fire Number

FIXED WING AND ROTARY WING

A	=	RECONNAISSANCE**
B	=	BIRD-DOGGING
C	=	COMMUNICATIONS
D	=	DETECTION
E	=	WATER-BOMBING**
F	=	FUEL TRANSPORT
G	=	FIRE TRANSPORT & SERVICE**
H	=	HELITACK**
I	=	INTRA-RED SCANNING**
K	=	AERIAL IGNITION**
L	=	PERSCRIBED BURNING**
M	=	MERCY
N	=	FERRY
O	=	OTHER
P	=	TOWERS
Q	=	FIRE MANAGEMENT
R	=	PREVENTION
S	=	GENERAL TRANSPORT
T	=	TRAINING
U	=	STANDBY
V	=	FALSE ALARM
W	=	ENFORECEMENT
X	=	EXPORT
Y	=	FOREST DEVELOPMENT
Z	=	FOREST SCIENCE

** Requires Fire Number

FIXED WING AND ROTARY WING – OTHER DIVISION FLYING

REGIONAL OPERATIONS

ROE/ERO	Enforcement
ROG/GRO	South Slave Bison Ecologist
ROO/ORO	Other
ROP/PRO	Environmental Protection
ROR/RRO	Resource Development
ROW/WRO	Wildlife

HEADQUARTERS OPERATIONS

HQE/EHQ	Enforcement

HQO/OHQ	Other
HQP/PHQ	Environmental Protection
HQR/RHQ	Resource Development
HQW/WHQ	Wildlife

AIR TANKER OPERATIONS FLIGHT CODING

CODE	PROJECT	PURPOSE
ATA	FIRE BOMBING	Flight time charged against AIR TANKER fire bombing mission/targets **FIRE # REQUIRED**
ATB	BIRDDOG FOR FIRE BOMBING	Flight time charged against birddogging fire bombing mission/targets **FIRE # REQUIRED**
ATC	BASE CHANGE	Flight time charged for base changing AIR TANKER groups.
ATD	TRAINING PRACTICE	Flight time changed for AAO training and aircrew proficiency practice.
ATE	ADMINISTRATION	Flight time charged for administration trips such as tanker base crew moves, contract administration etc.
ATF	POSITIONING FLIGHTS	Flight time charged for the ferry flights to and from their point of hire to a predetermined location.
ATG	FIRE STANDBY	For all AIR TANKER group standby
ATH	OTHER	Flying not covered in listed codes. **Flight details required.**
ATI	FALSE ALARM	Flight times for fires that were not found. **Flight details required.**
XP_	EXPORT	Flight times charged while in the service of other cooperative agencies. Use the last letter to indicate type of activity. (e.g. XPC = aircraft base changed while in another agencies jurisdiction.

Revised: ***May 2010***

ENVIRONMENT AND NATURAL RESOURCES

AIRCRAFT FLIGHT PURPOSE CODES – Forest Management

The following codes and required remarks must be indicated on the appropriate flight tickets/loadsheets and the daily aircraft costing screens. **All new fires discovered and reported during any flight or portion of a flight, regardless of flight purpose, will be noted** along with the fire number of the fire discovered on the flight ticket or loadsheet and in the Remarks field of the daily aircraft costing screen.

CODE	PROJECT	PURPOSE
A	RECONNAISSANCE	Flights around fire or series of fires to plan suppression strategy, map, or monitor fire activities. REQUIRES FIRE #
B	BIRD-DOGGING	Aircraft used as an aerial platform to direct air attack operations (bucketing or bombing). A Department air attack supervisor would be on board. **Requires flight details in remarks section of Daily Aircraft Costing Screen.**
C	COMMUNICATIONS	Flights to service radio equipment or installations, construct new installations, survey of new locations, install and service remote weather stations, etc. **Requires flight details in remarks section of Daily Aircraft Costing Screen.**
D	DETECTION	Planned aerial patrols by fixed or rotary wing aircraft for the purpose of fire detection. Includes aerial patrols with fire crews on board. **SHOULD NEVER HAVE A FIRE #** **REMARKS SECTION OF THE FLIGHT TICKET OR LOADSHEET AND DAILY AIRCRAFT COSTING SCREEN MUST INCLUDE ALL FIRES DISCOVERED DURING A PATROL. Also, requires flight details in remarks section of Daily Aircraft Costing Screen.**
E	WATER-BOMBING	Time Spent while actually carrying out water bombing drops. *Does not include refuelling times or travel to/from bombing zone. REQUIRES FIRE #

CODE	PROJECT	PURPOSE
F	FUEL TRANSPORT	Transport of fuel for the purpose of fuel cache restocking, fuel cache inventory, or support of fire operations. Includes flights required to remove or return empty fuel containers. **Requires flight details in remarks section of Daily Aircraft Costing Screen.**
G	FIRE TRANSPORT & SERVICE	Includes all fire suppression flying required to transport any personnel, equipment, and or supplies involved in fire suppression activities. This includes flying between main bases to or from fire camps or the fire line as well as on the fire. **INITIAL ATTACK FORCES MUST ALREADY BE IN PLACE.** REQUIRES FIRE #.
H	HELITACK	Delivery of initial attack crew and suppression gear to a new fire and return flight to designated base. Includes all successive flights by same aircraft to supply initial attack fire activities until end of first burning period or fire declared beyond I.A. (i.e.: R/W drops off crew, returns to base for more equip. & men, delivers to fire and returns to base. All Codes = H). REQUIRES FIRE #.
I	INFRA-RED SCANNING	All flights required for the use of any infrared scanning devices. REQUIRES FIRE #
K	AERIAL IGNITION	Use of helicopters for the purpose of utilizing or supervising aerial ignition devices on wildfire to prescribed burning operations. REQUIRES FIRE OR PRESCRIBED BURN #.
L	PRESCRIBED BURNING	All flying associated with planning, preparing for, and executing a prescribed burn. A prescribed burn that exceeds prescription and requires suppression action flying will be coded to the appropriate code. **Requires flight details and Prescribed Burn # or project # in remarks section of Daily Aircraft Costing Screen.**

CODE	PROJECT	PURPOSE
M	MERCY	Search and rescue, evacuation, medevac, etc. **Requires flight details in remarks section of Daily Aircraft Costing Screen.**
N	FERRY	Positioning and depositing of aircraft from operating base to a predetermined point. Includes flights from and to point of hire. **Requires flight details in remarks section of Daily Aircraft Costing Screen.**
O	OTHER	Forest Management flying not covered in listed codes. **Requires flight details on the Flight Ticket or Loadsheet and in remarks section of Daily Aircraft Costing Screen**
P	TOWERS	All flights or portions of flight required for the purpose of operating, maintaining, and servicing fire lookout towers. Includes flights to survey and/or construct new facilities. **Requires flight details in remarks section of Daily Aircraft Costing Screen.**
Q	FIRE MANAGEMENT	All flights or portions of flights for the purpose of community consultation and value-at-risk inspections. **Requires flight details in remarks section of Daily Aircraft Costing Screen.**
R	PREVENTION	Flight time attributed to the transportation of personnel, equipment and supplies, required to administer and/or conduct prevention programs (i.e.: school demonstration, road signs, cottage lot protection, open house, etc.) **Requires flight details in remarks section of Daily Aircraft Costing Screen**
S	GENERAL TRANSPORT	Transportation of men, equipment and supplies to or from Primary or Secondary bases, Fire Attack Bases, Base Camps, work projects etc. Not to be used for actual fire-line flying or in direct support of fire activity. **Requires flight details in remarks section of Daily Aircraft Costing Screen.** **SHOULD NEVER HAVE A FIRE #**

CODE	PROJECT	PURPOSE
T	TRAINING	Flight time of aircraft attributed to the training of, or transportation for the purpose of training fire crews and fire staff. **Requires flight details in remarks section of Daily Aircraft Costing Screen**
U	STANDBY OR UNUSED MINIMUMS	The unused or not flown hours of contract and casual hired aircraft AND/OR crew expenses when no flying is required. Aircraft and crew were on standby for dispatch. **If an aircraft is NOT used due to weather or unserviceablilty or on standby it must be specified in Remarks section of Daily Aircraft Costing Screen and on the Flight Ticket or Loadsheet.**
V	FALSE ALARMS	All flights or portions of flights attributed for flying to and from reported fires but which are not found or turn out to be no fire. **Requires flight details in remarks section of Daily Aircraft Costing Screen.**
W	ENFORCEMENT	All flights or portions of flights for the purpose of conducting fire investigations, enforcement activities and/or actions. **Requires flight details in remarks section of Daily Aircraft Costing Screen.**
X	EXPORT	All hours flown by Environment and Natural Resources' contract aircraft while in the service of other cooperative fire control agencies, RCMP or private industry. **Requires flight details in remarks section of Daily Aircraft Costing Screen.**
Y	FOREST DEVELOPMENT	All flights in support of forest development projects and/or activities. These projects/activities include: silviculture, forest inventory, reforestation, regeneration, pre-harvesting, post-harvesting and harvesting. **Requires flight details in remarks section of Daily Aircraft Costing Screen.**
Z	FOREST SCIENCE	All flight in support of Forest Science projects and/or activities. These projects and/or activities include: fire and forest ecology, fire history, FIDS (Forest Insect Disease Survey), vegetation classification and PSP (Permanent Sample Plots) etc. **Requires flight details in remarks section of Daily Aircraft Costing Screen.**

OTHER DIVISIONS
REGIONAL OPERATIONS

CODE	PROJECT	PURPOSE
	ENFORCEMENT	All Regional operations authorized flights in support of enforcement activities and/or actions. Includes enforcement actions for environmental protection, forest development and wildlife management programs. **Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.**
ROE	- Presup/Suppression Budget	
ERO	- Other Division's Budget	
	SOUTH SLAVE BISON ECOLOGIST	All Regional authorized flights by the South Slave Bison Ecologist or delegate in support regional wildlife management projects and/or activities. **Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.**
ROG	-Presup/Suppression Budget	
GRO	- Other Division's Budget	
	OTHER	All regional operations authorized flights in support of flying activities not covered in codes. **Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.**
ROO	- Presup/Suppression Budget	
ORO	- Other Division's Budget	
	ENVIRONMENTAL PROTECTION	All regional operations authorized flights for the purpose of inspections, monitoring or cleanup of agents, substances or material deemed harmful to the environment. **Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.**
ROP	-Presup/Suppression Budget	
PRO	- Other Division's Budget	
	RESOURCE DEVELOPMENT	All regional operations authorized flights in support of conservation education and resource development designated projects. **Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.**
ROR	-Presup/Suppression Budget	
RRO	- Other Division's Budget	
	WILDLIFE MANAGEMENT	All regional operations authorized flights in support of regional wildlife management projects and/or activities. Includes all bear deterrent and removal activities. **Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.**
ROW	-Presup/Suppression Budget	
WRO	- Other Division's Budget	

Presuppression and Suppression budget includes the Department's long-term rotary wing aircraft.

OTHER DIVISIONS

HEADQUARTERS OPERATIONS

(Headquarters in Yellowknife)

CODE	PROJECT	PURPOSE
	ENFORCEMENT	All headquarters authorized flights in support of enforcement activities and/or actions. Includes enforcement actions for environmental protection, forest development, and wildlife management programs. **Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.**
HQE	- Presup/Suppression Budget	
EHQ	- Other Division's Budget	
	OTHER	All headquarters authorized flights in support of flying activities not covered in codes. **Requires flight details and authorizing officer name on flight ticket or loadsheet and in remarks section of daily aircraft costing screen.**
HQO	-Presup/Suppression Budget	
OHQ	- Other Division's Budget	
	ENVIRONMENTAL PROTECTION	All headquarters authorized flights for the purpose of inspections, monitoring or cleanup of agents, substances or material deemed harmful to the environment. **Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.**
HQP	-Presup/Suppression Budget	
PHQ	- Other Division's Budget	
	RESOURCE DEVELOPMENT	All headquarters authorized flights in support of conservation education and resource development designated projects. **Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.**
HQR	- Presup/Suppression Budget	
RHQ	- Other Division's Budget	
	WILDLIFE MANAGEMENT	All headquarters authorized flights in support of regional wildlife management projects and/or activities. Includes all bear deterrent and removal activities. **Requires name of authorizing officer on flight ticket or loadsheet and daily aircraft costing screen.**
HQW	-Presup/Suppression Budget	
WHQ	- Other Division's Budget	

Presuppression and Suppression budget includes the Department's long-term rotary wing aircraft.

Northwest Territories

AIRCRAFT LOADSHEET/TRIP LOG

Page of

Flight Date	Aircraft Company	
Aircraft Registration	Aircraft Type	Flight Ticket No.
Contract No.	Pilot	Engineer

Time Reported for Duty: **Time Released from Duty:**

Departure		Arrival		Passengers (number)	Cargo - or # of Drops	Fire # / Project	Flight Code	Flight Time Hours / Miles	Remarks
Location	Time	Location	Time						
1.									
2.									
3.									
4.									
5.									
6.									
7.									
8.									
9.									
10.									
11.									
12.									
13.									
14.									
15.									

HOURS

Total Hours Flown Today:	
Previous Accumulated Hours:	
Total Accumulated Hours to Date:	

FUEL OBTAINED

Location	DRUMS			Bulk - Litres
	No.	Date of Fuel	Batch Number	

CREW EXPENSES

MEALS:	Breakfast/Lunch/Dinner/Incidentals				Hotel	Vehicle
	B	L	D	I		
Pilot:	☐	☐	☐	☐	$	$
Engineer:	☐	☐	☐	☐	$	

EXPENSE AUTHORIZATION

NOTE: Reimbursable expenses (GST excluded) are allowable only while away from home base and must NOT be for services provided by Department of Environment and Natural Resources.

X

Signature of ENR Representative Date d/m/y

Transport Canada's A.I.P. Canada (section: AIR 4-1)

FLIGHT TIME CONVERSION TABLE

00 – 02 minutes=0.0 hour
03 – 08 minutes=0.1 hour
09 – 14 minutes=0.2 hour
15 – 20 minutes=0.3 hour
21 – 26 minutes=0.4 hour
27 – 32 minutes=0.5 hour
33 – 38 minutes=0.6 hour
39 – 44 minutes=0.7 hour
45 – 50 minutes=0.8 hour
51 – 56 minutes=0.9 hour
57 – 60 minutes=1.0 hour

NO FLIGHT SHALL BE CONSIDERED TO HAVE A DURATION OF LESS THAN 0.1 HOUR.

METRIC CONVERSION TABLES

TO CONVERT	INTO	Multiply by
Centimetres	Inches	.394
Feet	Metres	.305
U.S. Gallons	Litres	3.785
Imp. Gallons	U.S. Gals.	1.201
Imp. Gallons	Litres	4.546
Inches	Centimetres	2.540
Inches Hg.	Lbs. sq. in.	.490
Kgs./Litre	Lbs./Imp. Gal	10.023
Kgs./Litre	Lbs./U.S. Gal.	8.333
Kilograms	Pounds	2.205
Kilometres	St. Miles	.621
Kilometres	N. Miles	.540

TO CONVERT	INTO	Multiply by
Lbs./Imp. Gal	Kgs./Litre	.0998
Lbs./U.S. Gal.	Kgs./Litre	.120
Lbs. sq. in.	Inches Hg.	2.040
Litres	U.S. Gals.	.264
Litres	Imp. Gallons	.220
Metres	Feet	3.281
N. Miles	Kilometres	1.852
N. Miles	St. Miles	1.152
Pounds	Kilograms	.454
St. Miles	Kilometres	1.609
St. Miles	N. Miles	.868
U.S. Gals.	Imp. Gallons	.833

AIR TANKER
LOAD JETTISON AREAS

Inuvik (EV)	Location: one mile south east of Campbell Lake Coordinates: 68° 15' 30" N x 133° 13' 30" W
Norman Wells (VQ)	Location: on north slope of Franklin Mountain Range Coordinates: 65° 22' 00" N x 126° 40' 00" W
Fort Simpson (FS)	Location: Fort Simpson Town Dump Coordinates: 61° 50' 00" N x 121° 18' 30" W
Yellowknife (ZF)	Location: fifteen miles east/northeast of Yellowknife Coordinates: 62° 26' 00" N x 113° 59' 00" W
Hay River (HY)	Location: north east of Cameron Hills Coordinates: 60° 35' 30" N x 116° 55' 00" W
Fort Smith (SM)	Location: northwest of airport out of control zone Coordinates: 60° 00' 00" N x 112° 00' 00" W

Meals and Incidental Expenses – April 01, 2014

The allowance for meals and incidental expenses when traveling in Canada are now:

Breakfast	$22.20
Lunch	$23.75
Dinner	$54.10
Incidentals	$17.30
	$117.35

FOREST MANAGEMENT DIVISION

Department of Environment and Natural Resources
Box 7149 McDougal Road Fort Smith, NTX0E 0P0

Office Phone: (867) 872-7700
Main Fax: (867) 872-2077
Weather Fax: (867) 872-3827

FOREST MANAGEMENT DIVISION				Fax: 872-2077
NAME	POSITION	OFFICE	CELL	HOME
William Mawdsley	**Director**	**872-7700**		
Frank Lepine	**Associate Director**	**872-7713**	**872-0307**	**872-2117**
Shauna Walsh	Administrative Assistant	872-7700	872-0360	872-5399

AVIATION SERVICES				Fax: 872-2148
NAME	POSITION	OFFICE	CELL	HOME
Duane Sinclair	**Manager**	**872-7719**	**872-0258**	**872-2188**
Wendy Pennycook	Aviation Services Admin Supervisor	872-7720	872-0264	872-2372
Krystal Brown	Aviation Services Admin Clerk	872-7721	872-0653	
Brandy Wilson	Aviation Services Admin Officer	872-7723	872-0392	872-4800
Vern Hoeppner	Manager, Air Tanker Base		875-7563	

FIRE OPERATIONS				Fax: 872-2077
NAME	POSITION	OFFICE	CELL	HOME
Rick Olsen	**Manager**	**872-7707**	**872-0790**	**872-2438**
Jason Currie	Training and Standards Officer	872-7717	872-0840	872-5402
Shari McArthur	Forest Records Coordinator	872-7716		872-0591
Westly Steed	FireSmart Coordinator	872-7704	872-0394	872-4414

FOREST MANAGEMENT SERVICES				Fax: 872-2077
NAME	POSITION	OFFICE	CELL	HOME
Mike Gravel	**Manager**	**872-7724**	**872-0525**	**872-3383**
David Purchase	Forest & Fire Management Forester	872-7743	872-0308	872-4844
Ray Menard	Material Management Officer	872-7732	872-0391	
Tim Pankratz	Asst Material Management Officer	872-7731	872-0103	
Jay MacDonald	Equipment Maintenance Coordinator	872-7730	872-0312	872-3849
Darren Linaker	Telecommunications Tech. Supervisor	872-7727	872-0310	872-3506
Arthur Taylor	Telecommunications Technician	872-7726	872-0109	872-2872

FIRE SCIENCE				Fax: 872-2077
NAME	POSITION	OFFICE	CELL	HOME
Kris Johnson	**Manager** (away until September 2014)	**872-7706**	**872-0298**	**872-2847**
Larry Nixon	A/Manager & Wildfire Risk Mgmt. Coord.	872-7705	621-0286	872-2696
Chad Funk	Info. Systems & Technology Specialist	872-7722	872-0108	872-3460
Franco Nogarin	Forest Planning Officer	872-7703	872-0393	872-3339
Matthew Coyle	Geomatics Analyst	872-7708		

PROGRAM SUPPORT SERVICES				Fax: 872-3019
NAME	POSITION	OFFICE	CELL	HOME
Crystal Lantz	**Manager**	**872-7702**		
Linda Ellsworth	Accounts Payable Clerk	872-7701		
	Casual Accts. Payable Clerk (Travel/OT)	872-7709		

SOUTH SLAVE REGIONAL OFFICE

Department of Environment and Natural Resources
Box 900Fort Smith, NTX0E 0P0

Office Phone: (867) 872-6400
Fax: (867) 872-4250

Duty Officer: (867) 872-6422/6409

Wildlife Emergency: 872-0400

CELL PHONES:

Regional Duty Officer: 872-0541
Warehouse: 872-0561
Fire Clerk: 872-0768

Call Sign: XLI - 57

SOUTH SLAVE REGIONAL OFFICE				Fax: 872-4250
NAME	**POSITION**	**CALL SIGN**	**OFFICE**	**CELL/HOME**
Troy Ellsworth	**Superintendent**	DS1	**872-6401**	**872-0724/2505**

FOREST MANAGEMENT				Fax: 872-2035
NAME	**POSITION**	**CALL SIGN**	**OFFICE**	**CELL/HOME**
Daniel Allaire	**Manager, Forests**	DS2	**872-6425**	**872-0543/2043**
Sid Hudson	Material Management Officer	DS5	872-6437	872-0561/4800
Gerald Doucette	Assistant Storesperson	DS6	872-6402	872-2156 (h)
Brent Starling	Forest Officer	DS3	872-6424	872-0486 (c)
Dallas Phillips	GIS and Data Management Tech	DS7	872-6405	872-0340/621-0021
Louie Beaulieu	Fire Technician	DS4	872-6409	872-3987(h)
Doraine Grenier	Forest Administration Clerk		872-6406/6413	872-5645 (h)
Melanie McCallum	Fire Clerk - Seasonal		872-6420	872-2717 (h)
Tanya Hoffman	Fire Clerk		872-6419	872-5888 (h)
Fire Room			**872-6422**	

SHARED SERVICES			Fax: 872-4250
NAME	**POSITION**	**OFFICE**	**HOME**
Melissa Johns	Regional Corporate Services Officer	872-6411	
Christy Woledge	Casual Corporate Services Clerk	872-6400	

WILDLIFE AND ENVIRONMENT				Fax: 872-4250
NAME	**POSITION**	**CALL SIGN**	**OFFICE**	**CELL/HOME**
Tony Vermillion	**Manager, Wildlife & Environment**	**SM1**	**872-6404**	621-0444/3658
Terrence Campbell	Renewable Resource Officer II	SM3	872-6417	621-0243/2080
Ken Mercredi	Renewable Resource Officer II	SM4	872-6418	872-0400/3514
Cheyeanne Paulette	Renewable Resource Officer II		872-6403	
Karl Cox	Wildlife Technician III	SM6	872-6423	621-0183/2098
Michelle Swallow	A/Manager, Wildlife Research & Monitoring	SM7	872-6408	
Terry Armstrong	Bison Biologist	SM8	872-6446	872-3125 (h)
Wendy Bidwell	Water Resources Officer		872-6421	

FORT RESOLUTION				Fax: 394-5101
NAME	**POSITION**	**CALL SIGN**	**OFFICE**	**HOME**
Vacant	Renewable Resource Officer II	FR1	394-4596	
James Larocque	Fire Clerk		394-4596	
Eric Beck	Crew Coordinator	FR2	394-4596	394-4001

FORT SMITH AIR TANKER BASE
Department of Environment and Natural Resources
Box 7, Fort Smith, NTX0E 0P0

CALL SIGN: **XLM – 598**
Phone: (867) 872-2959
Fax: (867) 872-4601
Fire Line: (867) 872-2187

NAME	POSITION	OFFICE	CELL
Bart Hartop	Air Attack Officer	872-2959	872-0267
Natalie Villeneuve	Dispatcher	872-2959	872-0271

HAY RIVER AREA OFFICE

Department of Environment and Natural Resources
156 Miron Drive, Hay River, NTX0E 0R2

Office Phone: (867) 875-5550
Fax: (867) 875-5559
CALL SIGN: XLI - 55

CELL PHONES:

Jerry Hordal: 875-7473
Ron Antoine: 875-7562
Dean McMeekin: 874-1134
Albert Bourque: 875-7033
Warehouse: 875-8579
Wildlife Emergencies: 875-7640

HAY RIVER AREA OFFICE				Fax: 875-5559
NAME	**POSITION**	**CALL SIGN**	**OFFICE**	**HOME**
Jerry Hordal	Renewable Resource Officer III	HR1	875-5554	874-4881
Suzanne Boucher	Renewable Resource Officer II	HR2	875-5552	
Lyle Froehlich	Fire Technician	HR5	875-5550	874-2173
Albert Bourque	Regional Environmental Coordinator	EP1	875-5571	
Dean McMeekin	Material Management Officer	HR6	875-5564	874-3313
Greg Pierre	Casual Warehouse Person	HR7	875-5568	
David Johnson	Radio Operator / Fire Clerk		875-5555	874-3881
Vacant	Fire Clerk		875-5557	
Maxine Gauthier	Area Corporate Services Clerk		875-5550	
Duty Officer			**875-5558**	
Fire Centre Fax Number:			**875-5556**	

FORT PROVIDENCE				Fax: 699-3700 Call Sign: XMP – 204
NAME	**POSITION**	**CALL SIGN**	**OFFICE**	**HOME**
Danny Beaulieu	Renewable Resource Officer III	JP1	699-3002	699-4162
Edward Landry	Renewable Resource Officer II	JP2	699-3002	699-3074
Vacant	Fire Technician	JP3	699-3014	
Carol Bonnetrouge	Fire Clerk		699-3014	699-3413
Fire Centre **Lab/Warehouse**			**699-3014** **699-3029** **699-4271**	
Fire Centre Fax Number:			**699-3031**	

HAY RIVER AIR TANKER BASE

Department of Environment and Natural Resources
120 Whitlock Road, Airport, Hay River, NT X0E 0R9

CALL SIGN: XLM-597
Phone: (867) 874-2280
Fax: (867) 874-2995
Fire Line: (867) 874-6442

NAME	POSITION	OFFICE	CELL
David (Yogi) Heron	Air Attack Officer	874-2280	872-0054
Vern Hoeppner	Tanker Base Manager	874-2280	875-7563
Brandi Walker	Dispatcher Clerk	874-2280	872-0112

NORTH SLAVE REGIONAL OFFICE

Department of Environment and Natural Resources
Box 2668 Yellowknife, NTX1A 2P9
Duty Officer: (867) 920-6115 / FIRE OPERATIONS ROOM: 920-6117
Wildlife Emergencies (867) 873-7181

Office Phone: (867) 873-7184
Main Fax/Fire Ops Fax: (867) 873-6230/0403
Call Sign: XLJ-214

NORTH SLAVE REGIONAL OFFICE				Fax: 873-6230
NAME	**POSITION**	**CELL**	**OFFICE**	**HOME**
Fred Mandeville	Superintendent		920-6114	

FOREST MANAGEMENT				Fax: 873-0403
NAME	**POSITION**	**CELL**	**OFFICE**	**HOME**
Roger Fraser	Manager of Operations	445-3200	920-6456	920-7005
Janice Ziemann	Forest Officer	445-3206	920-6104	
Vacant	Seasonal Regional Fire Technician		920-6599	
Clayton Pielak	Material Management Officer	445-3202	920-6116	
Kelly Norris	Forest Fire Management Admin Clerk		920-6903	
Karlene Gordon	Forest Fire Management Clerk		920-6117	
Vacant	Forest Fire Management Clerk		920-6117	
HELIBASE			873-7995	
Crew Lounge			920-6917	

SHARED SERVICES			Fax: 873-0639
NAME	**POSITION**	**OFFICE**	**HOME**
Sherri Plante	Senior Corporate Services Officer	873-7384	

WILDLIFE AND ENVIRONMENT				Fax: 873-6230
NAME	**POSITION**	**CELL**	**OFFICE**	**HOME**
Roger Fraser	Manager of Operations		920-6456	
Shelly Acton	Wildlife Administration Clerk		873-7184	
Ian Ellsworth	Renewable Resource Officer III		920-3049	
	Renewable Resource Officer II		920-6103	
Adrian Lizotte	Renewable Resource Officer II	445-3208	873-7362	
Brad McInnes	Regional Environmental Protection Officer		920-3387	
Sarah True	Regional Environmental Coordinator		873-7443	
Bruno Croft	Manager, Research and Monitoring	445-6334	873-6265	
Dean Cluff	Biologist		873-7783	
	Wildlife Lab		873-7427	

TLICHO OFFICE - Behchokǫ̀				Fax: 392-6339
NAME	**POSITION**	**CALL SIGN**	**OFFICE**	**HOME**
Lawrence Lewis	Renewable Resource Officer III		392-6511	371-5994
Kelvin Kotchilea	Wildlife Officer II		392-6511	392-6095
JP Rabesca	Renewable Resource Officer I		392-6511	
Bessie Apples	Fire Clerk		371-3133	
Vacant	Fire Crew Coordinator		371-3133	
Michael Huskey	Storesperson		371-3133	
Frank Channel Forest Fire Centre - Seasonal Only		**Fax: 371-5011**	**371-3133**	

LUTSELK'E OFFICE				Fax: 370-3008
NAME	POSITION	CALL SIGN	OFFICE	HOME
Tom Lockhart	Renewable Resource Officer II	NG1	370-3141	370-3077
Fire Centre			370-3931	

DENESOLINE				
NAME	POSITION	CALL SIGN	OFFICE	HOME
Roy Shields	Denesoline (Lutselk'e)		766-2370	

DETON CHO				
NAME	POSITION	CALL SIGN	OFFICE	HOME
Roy Erasmus Jr.	Deton Cho (Yellowknife)		873-6533	

NISHI-KHON				
NAME	POSITION	CALL SIGN	OFFICE	HOME
Jim Golchert	Nishi-Khon (Bchchokǫ̀)		693-3462	
Frank Beaulieu	Nishi-Khon Supervisor (Frank Channel)		997-3040	997-3095

YELLOWKNIFE AIR TANKER BASE
Department of Environment and Natural Resources
Box 1619, Yellowknife, NTX1A 2P3
(108 McMillian Street)

CALL SIGN: XLM-596
Phone: (867) 873-3778
Fax: (867) 920-2096
Fire Line: (867) 873-8133

NAME	POSITION	OFFICE	CELL
Erin Evans	Dispatcher	873-3778	872-0837
Jonathan Williams	Air Attack Officer	874-2280	872-0314

SAHTU REGIONAL OFFICE

Department of Environment and Natural Resources
Box 130 Norman Wells, NTX0E 0V0
Duty Officer / Forest Fire Line: (867) 587-3512

Office Phone: (867) 587-3506
Fax: (867) 587-3516
Direct Fire Line: (867) 587-4984

SAHTU REGIONAL OFFICE				Fax: 587-3516
NAME	**POSITION**	**FACSIMILE**	**OFFICE**	**HOME**
Jeff Walker	**Superintendent Cell:446-7578**	**587-3516 (NW1)**	**587-3532**	**587-4373**

FOREST MANAGEMENT				Fax: 587-3535
NAME	**POSITION**	**CALL SIGN/CELL**	**OFFICE**	**HOME**
Harvey Pierrot	**Manager, Forests**	NW2 / 446-9198	**587-3507**	
Jules Fournel	Regional Forest Officer	NW3 / 444-0074	587-3510	587-4668
Shawn Maxwell	Seasonal Fire Technician	NW4 / 447-0073	587-3509	
Michaela Douglas	Forest Fire Management Admin Clerk		587-3511	
Kara Hendrie	Forest Fire Management Clerk		587-3514	
Tim Melnyk	Regional Storesperson	NW7	587-3513	587-2765
Mellissa McLellan	Casual Storesperson	NW8	587-3513	

SHARED SERVICES			Fax: 587-3516
NAME	**POSITION**	**OFFICE**	**HOME**
Kathleen T'Seleie	Financial Shared Services Administration Clerk	587-3500	

ENVIRONMENT				Fax: 587-
NAME	**POSITION**	**CALL SIGN/CELL**	**OFFICE**	**HOME**
Laurel McDonald	Regional Environmental Coordinator	NW6 / 447-0078	587-3501	
Vacant	Environmental Protection Officer	NW9 /	587- 3530	

SAHTU WILDLIFE MANAGEMENT				Fax: 587-3525
NAME	**POSITION**	**CELL**	**OFFICE**	**HOME**
Richard Popko	**MGR, Wildlife Research & Monitoring**		**587-3517**	587-2648
Phil Spencer	GIS Specialist		587-3519	587-4417
Heather Sayine-Crawford	Cumulative Effects Biologist		587-3518	587-4174
Stephanie Behrens	Wildlife Technician		587-3521	
FIELD OPERATIONS				**Fax: 587-3516**
NAME	**POSITION**	**CALL SIGN/CELL**	**OFFICE**	**HOME**
Vacant	Renewable Resource Officer II	NW5	587-3515	
Sandra T'Seleie	Licensing Clerk	587-3506	587-2241	
24 Hour Bear Line			**587-2422**	
Wildlife on Call		**587-6526**		

COMMUNITY RENEWABLE RESOURCE OFFICERS				
NAME / Call Sign	**POSITION**	**LOCATION**	**OFFICE/HOME**	**Fax**
Leeroy Andre / Deline 1	Renewable Resource Officer III	Deline(c:447-0072)	589-3421/4600	589-4906
Mabel Tatchinon / Good Hope	Renewable Resource Officer II	FGH (c:447-0076)	598-2271/2114	598-2708
Ron Doctor / Tulita 1	Renewable Resource Officer II	Tulita (447-0075)	588-3441/4077	588-3907

NORMAN WELLS AIR TANKER BASE
Department of Environment and Natural Resources
C/o Sahtu Regional Office
Box 130, Norman Wells, NT X0E 0V0

CALL SIGN: VOD-261
Phone: (867) 587-2923
Fax: (867) 587-2661
Fire Line: (867) 587-2015

INUVIK FOREST MANAGEMENT OFFICE – SHELL LAKE

Department of Environment and Natural Resources, PO Box 2749, Inuvik, NT X0E 0T0

Duty Officer: (867) 678-6691 **Fire Emergency Line: (867) 678-0590**

INUVIK REGIONAL OFFICE			Fax: 678-6659
NAME	POSITION	OFFICE	HOME
Stephen Charlie	**Superintendent**	**678-6690**	
Judy Francey	Corporate Services Clerk	678-6650	
	Senior Corporate Services Clerk		

FOREST MANAGEMENT				Fax: 678-6699
NAME	POSITION	CELL	OFFICE	HOME
Martin Callaghan	**Manager, Forests**	**678-0590**	**678-6691**	**777-3983**
Ernie Francis	Forest Officer	678-5064	678-6676	777-4411
Vacant	Forest Fire Management Admin Clerk		678-6695	
Vacant	Forest Fire Management Clerk		678-6696	
Chris Larocque	Materials Management Officer	678-0978	678-6661	
Owen Allen	Seasonal Warehouse Person		678-6660	

WILDLIFE				Fax: 678-6699
NAME	POSITION	CELL	OFFICE	HOME
Doug Villeneuve	**Manager, Wildlife and Environment**	678-0587	678-6680	
Tobias (Toby) Halle	Renewable Resource Officer III		678-6681	
Lila Voudrach	Renewable Resource Officer III		678-6652	
Kevin V. Allen	Renewable Resource Officer II		678-6682	
Lloyd Gruben	Renewable Resource Officer II	678-5314	678-2290	
Vacant	Environment al Protection Officer	678-0101	678-6651	
Vacant	Conservation Education Officer		678-6653	

WILDLIFE MANAGEMENT				Fax: 678-6699
NAME	POSITION	CELL	OFFICE	HOME
Marsha Branigan	**Manager, Wildlife Management**	**678-0477**	**678-6670**	**777-4010**
Jody Pongratz	Regional Biologist		678-6671	
Tracy Davison	Regional Biologist		678-6672	777-2559
Hiroo Sawada	GIS Specialist		678-6675	
Christine Menno	Regional Wildlife Technician		678-6673	

COMMUNITY RENEWABLE RESOURCE OFFICERS				
NAME	POSITION	LOCATION	OFFICE	FACSIMILE
Ian McLeod	Renewable Resource Officer II	Aklavik	978-2248	978-2061
Glen Alexie	Renewable Resource Officer II	Fort McPherson	952-2200	952-2269
Colin Okheena	Renewable Resource Officer I	Ulukhaktok	396-4505	396-3033
Rolland Malegana	Renewable Resource Officer II	Tuktoyaktuk	977-2350	977-2335
Samuel Lennie Jr.	Renewable Resource Officer I	Tsiigehtchic	953-3605	953-3611
Bobby Ruben	Renewable Resource Officer I	Paulatuk	580-3021	580-3022
Greg Elias	Renewable Resource Officer I	Sachs Harbour	690-3060	

INUVIK AIR TANKER BASE (contact Shell Lake Office) **CALL SIGN: XLJ-78**

C/o Forest Management Division, Box 7, 149 McDougal Road Fort Smith, NT X0E 0P0

Contents

DEHCHO REGIONAL OFFICE

Department of Environment and Natural Resources
Box 240, Fort SimpsonNTX0E 0N0

Office Phone: (867) 695-7450
Main Fax: (867) 695-2381

Duty Officer: (867) 695-7485
Bear Line: (867) 695-7433

Fire Emergency Line: (867) 695-7484

DEHCHO REGIONAL OFFICE			Fax: 695-2381
NAME	**POSITION**	**OFFICE**	**HOME**
Carl Lafferty	**Superintendent**	**695-7451**	**695-2016**

FOREST MANAGEMENT			Fire Suppression Fax: 695-2442 Warehouse Fax: 695-3606	
NAME	**POSITION**	**CELL**	**OFFICE**	**HOME**
Loyal Letcher	**Manager, Forests**	695-6589	**695-7480**	**695-2116**
Steve Gooderham	Regional Forester		695-7482	695-3441
Brendan Tsetso	Forest Officer	445-6467	695-7481	695-3644
Michael Tsetso	Regional Fire Technician	695-6645	695-7465	695-2542
Naomi Antoine	Fire Administration Clerk		695-7488	695-2268
Vacant	Fire Clerk		695-7487	
Courtney Tsetso	Fire Clerk	446-3623	695-7486	695-3644
Michael Canney	Material Management Officer	695-6686	695-7490	695-2069
Brenda Norwegian	Stores Assistant		695-7491	695-2023
Kurt Tsetso	Stores Assistant	695-6316	695-7491	695-3895

SHARED SERVICES			Fax: 695-7501 / 695-2381
NAME	**POSITION**	**OFFICE**	**HOME**
Lori Chemerys	Regional Senior Corporate Services Officer	695-7462	

Wildlife Office: 695-7473	WILDLIFE & BIOLOGY			Fax: 695-2381
NAME	**POSITION**	**CELL**	**OFFICE**	**HOME**
Marti Lys	Renewable Resource Officer III	875-7998	695-7471	
Kelly Pennycook	Renewable Resource Officer II	695-6620	695-7470	695-3520
J. George Tsetso	Renewable Resource Officer I		695-7472	695-3274
Nic Larter	Regional Biologist		695-7475	
Danny Allaire	Wildlife Technician II		695-7476	695-2605

ENVIRONMENTAL PROTECTION			Fax: 695-2381
NAME	**POSITION**	**OFFICE**	**HOME**
Ken Lambert	Regional Environmental Protection Officer	695-7477	695-3419

Office: 770-3451	FORT LIARD			Fax: 770-4600
NAME	**POSITION**	**CELL**	**OFFICE**	**HOME/CELL**
Floyd Bertrand	Manager, Wildlife	250-500-4043	770-4300	770-2211
Jim Deneron	Renewable Resource Officer I	250-500-3428	770-4300	770-2244
Vacant	Fire Technician		770-4300	
Patricia Bertrand	Corporate Services Clerk		770-4300	770-2211
George Jooris	Warehouse Person		770-3209	770-4815

FORT SIMPSON AIR TANKER BASE
Department of Environment and Natural Resources
C/o Dehcho Regional Office
Box 240, Fort SimpsonNTX0E 0N0

CALL SIGN: VXN-89
Phone: (867) 695-2717
Fax: (867) 695-2727

FOREST RESOURCES OFFICE

Department of Environment and Natural Resources
Box 4354, Hay RiverNTX0E 1G3

Office Phone: (867) 874-2009
Fax: (867) 874-6236

FOREST RESOURCES				
NAME	POSITION	CELL	OFFICE	HOME
Tom Lakusta	Manager, Forest Resources	875-7495	874-2009	874-4615
Lisa Smith	Inventory & Analysis Forester	875-7496	874-2009	874-2776
	Territorial Silviculturist		874-2009	
Tyler Rea	Resource Assessment Forester	875-7417	874-2009	874-5849
Rafe Smith	Coordinator Silviculture Operations	875-7567	874-2009	874-2776
Kathleen Groenewegen	GIS Specialist	875-2900	874-2009	874-3830
Ron D. Antoine	Traditional Knowledge Coordinator		874-2009	

WILDLIFE DIVISION – YELLOWKNIFE OFFICE (Scotia Centre-5)

Department of Environment and Natural Resources
600, 5102-50th Avenue Yellowknife, NTX1A 3S8
Office Phone: (867) 920-8064
Fax: (867) 873-0293

WILDLIFE DIVISION			
NAME	POSITION	OFFICE	CELL/HOME
Lynda Yonge	Director	**920-8043**	**873-1135(c)**
Ruth Delorme-Roy	Administrative Assistant	920-8064	
Rob Gau	Manager, Biodiversity Conservation	873-7588	873-4912(c)
Joanna Wilson	Species at Risk Biologist	873-7588	
Claire Singer	Species at Risk Implementation Supervisor	920-6362	
Vacant	Species at Risk Coordinator	920-6316	
Kendra McGreish	Species at Risk Coordinator	920-6316	
Lena Schofield	System Administrator	873-7775	
Patricia Handley	Information Coordinator	873-7760	
Suzanne Carriere	Wildlife Biologist (Biodiversity)	920-6327	
Bonnie Fournier	**Data Analyst**	**920-6593**	
Nicole McCutcheon	Manager, Wildlife Research & Mgmt.	920-8067	446-3837(c)
Terry Armstrong	Wildlife Biologist, Bison (Fort Smith Office)	872-6446	
Adrian D'Hont	Wildlife Biologist, Traditional Knowledge/Harvest Data	873-7771	
Brett Elkin	Disease/Contaminants Specialist	873-7761	
Iga Stasiak	Wildlife Veterinarian	873-7761	
Jan Adamczewski	Wildlife Biologist, Ungulates	873-7763	
Judy Williams	Biologist (Ungulate Studies)	873-7782	873-9871(h)
Karin Clark	Cumulative Effects Biologist	920-3014	
Robert Mulders	Wildlife Biologist, Carnivores/Furbearers	920-6315	
James Hodson	Wildlife Biologist, Environmental Assessment/Habitat	920-3114	
Andrea Patenaude	Wildlife Biologist, Environmental Assessment/Habitat	920-6487	
	Wildlife Laboratory	873-7427	
	Wildlife Warehouse (Kam Lake)	920-8952	

AERODROME LOCATION INDICATORS FOR NWT SETTLEMENTS

VL	Colville Lake
WJ	Deline *(Fort Franklin)*
PY	Fort Chipewyan, Alberta
GH	Fort Good Hope
JF	Fort Liard
FM	Fort McPherson
JP	Fort Providence
FL	Fort Reliance
FR	Fort Resolution
FS	Fort Simpson
SM	Fort Smith
FB2	Frank Channel
RA	Gameti *(Rae Lakes)*
HY	Hay River
EV	Inuvik
LK	Łutselk'e*(Snowdrift)*
VQ	Norman Wells
RE2	Behchokǫ̀ *(Rae/Edzo)*
FN	Tulita *(Fort Norman)*
FJ2	Wekweètì *(Snare Lake)*
EM3	Whati *(Lac La Marte)*
XY	Whitehorse, Yukon
WY	Wrigley
ZF	Yellowknife

AIR CREW BRIEFING FORMAT

When an aircraft arrives on a Fire or a Project (i.e. Caribou Survey, Fuel Caching etc.) or at a Region, a full briefing **MUST** be done with the air crew. Aircrews should also be briefed every morning on the jobs or activities anticipated for that day. This will assist them in their planning of meals, rest periods, or maintenance. Remember to update the briefing when circumstances change. The following is a checklist that may be used when briefing aircrews (Note: some items are not applicable depending on the job).

1. Agency Policy and Procedures

(a) Flight and duty time limitations
(b) Fuelling procedures
(c) Persons authorized to order flights
(d) Mandatory flight following
(e) Air Traffic control over wildland fires
(f) Rotations schedule policy
(g) Initial Response Officer standard operating procedures

2. Administration and Operations

(a) Flight tickets and codes
(b) Meals, lodging, and vehicles
(c) Maintenance requirements, equipment & parts storage, washing facilities
(d) Emergency response procedures (down or overdue/missing aircraft)
(e) Communications directory (repeaters, call signs)
(f) Dispatch procedures (grid, bearing, distance, etc.)
(g) Mandatory radio procedure
(h) Current fire history and background
(i) Resources deployment (camps, bases, other aircraft locations)
(j) Fuel cache locations
(k) Wildlife survey routes (maps of survey area etc.)
(l) Type of flying required such as low level, straight line transects, radio tracking etc.
(m) Air attack procedures
(n) Load configurations and load calculations
(o) Passenger briefings
(p) Assignment for the day (i.e. retrieving wildlife collars, fuel caching, fire servicing etc.)
(q) Crew they are working with (call sign, names if no call sign)
(r) Aircrew history (type and amount of hours flown, time spent in remote bases, maintenance schedule, etc.)

PASSENGER SAFETY BRIEFING FORMAT

No one will be allowed to board an aircraft until they have been briefed by experienced Department personnel or the pilot-in-command of the aircraft of the following:

1) How to approach and move away

Danger from prop and/or rotor wash (loose objects, hats, debris, etc.)
Wait for signal from pilot – hand gestures
Move calmly (no running)
Crouched position and in pilots view (as applicable for RW)
Slope of the ground (as applicable for RW)
Never approach the rear of the helicopter - danger from tail rotors (as applicable)
When aircraft propellers are running, never walk beyond the red painted line on float or on fuselage when walking from back to front of aircraft.

2) Boarding and Exiting Procedures

Functioning of doors (inside and out)
Use of seatbelts and shoulder harness
Use of electronic devices (headsets, cell phones, etc.)
No smoking inside or around the aircraft

3) Equipment and Cargo

Cargo must be carried in or out, not thrown
No objects above shoulder height
Carry long equipment horizontally
Functioning of cargo doors and cargo compartment load limits
Cargo must be secured (cabin and cargo compartment)
Storage of bear spray, guns, ammunition, sharp objects
Storage of car batteries, gasoline, dangerous goods

4) Emergency Procedures

Position for emergency landing
Wait for pilot instructions before exiting (if conscious)
Emergency calls
Exiting when helicopter is on its side (as applicable)
Helping each other
Location and use of fire extinguisher
Location and use of emergency location transmitter (ELT)
Location and use of first aid kit
Location and use of survival kit
Location and use of satellite phone
Battery switch/disconnection, fuel switch shut-off

5) Additional Briefing

No pilot distractions during take-off, maneuvering, or landing
Landing area, helipad housekeeping, and debris to be picked up (as applicable for RW)
Sling loads (as applicable for RW)
Winter hazards (as applicable)
Life vests and raft (as applicable)
Clothing dependent on season (for job/weather)
Personal equipment requirements (earplugs, etc.)

STANDARD DISPATCH FORMAT

After the engine has been started and the radio master turned on, the Initial Response Officer contacts base for the dispatch information. The information is given in this order:

1.	**Fire #:**	
2.	**Co-ordinates:**	Latitude and longitude
3.	**Bearing:**	Magnetic bearing from your location
4.	**Distance:**	To be given in statues miles measured in a straight line from your location
5.	**Other Aircraft:**	Other aircraft dispatched, their frequencies and call signs.
6.	**Remarks:**	Geographic references, Incident Commander, other crews and their calls signs or other relevant information.

On the dispatch the Initial Response Officer is given some critical pieces of information.

To be certain that this information has been received correctly, the Initial Response Officer will read back this information to the dispatcher.

The dispatcher responds, "Read back correct", if no errors have been made. Once the dispatch has been received the Initial Response Officer plots the fire on his/her map, shows the pilot the location marked on the map and passes on the bearing and distance to the pilot.

This is done as soon as possible so the pilot can inform Flight Services of the outbound track and distance.

Contents

FORT SMITH SERVICE DIRECTORY

ACCOMMODATIONS

PELICAN RAPIDS INN - kitchenettes, AC, fridges in suites	872-2789
WOOD BUFFALO INN – Suites with separate bedroom, living room, kitchenette, free wireless, www.woodbuffaloinn.com	872-2789
R HOUSE B&B- www.rhousefortsmith.com/cms/	872-5354
WHISPERING PINES COTTAGE (B&B)	872-2906
LOG HOME RENTALS	872-2484
FORT SMITH CONSTRUCTION CAMP SERVICES	872-2229
WWW.WHOOPINGCRANEGUESTHOUSE.CA	872-3426
EARL JACOBSON SUITE	872-2284
KING GEORGE'S B&B	872-2366/0941
INN TRIALLAIRE B&B	872-0931

VEHICLES

FORT SMITH CONSTRUCTION	872-2229

RESTAURANTS

THE PELICAN BOARDROOM	872-2729
BERRO'S PIZZERIA	872-3332
PELICAN RAPIDS GOLF & COUNTRY	872-4653
ANNA'S HOME COOKING	872-2582
S & S DESIRABLE DELICACIES (Rec Center)	872-4008

FORT SIMPSON SERVICE DIRECTORY

ACCOMMODATIONS

THE GARDENS- (above liquor store) a 2 & 3 bedroom, furnished apartments, Cable TV, internet, Jacuzzi& sauna	695-2456
JANORS (Ask for Orville) 3 bedroom self-contained suite /w Continental breakfast (no answer - call Health Centre at 7000)	695-2077
DEH CHO SUITES http://www.dehcho.net/ A three bedroom suite w/2 bathrooms. Four self-contained suites sharing one kitchen. Suites with internet & satellite TV	695-2309
WILLOWS INN- 1 bedroom suites, some with kitchen facilities	695-2007
MARODA MOTEL- Cable TV, kitchenettes & air conditioned	695-2602
NAHANNI INN Cable TV, restaurant, bar	695-2201
EXECUTIVE SUITES (Simpson Air) Two bedroom suites with full kitchen, satellite TV, internet, exercise machines & laundry	695-2007
MACKENZIE REST INN http://www.mackenzierest.ca/ Bed and Breakfast, 5 rooms, satellite TV, Skype	695-2357
THE WILD ROSE BOARDROOM AND RETREAT	695-2882
LIIDLI KUE COTTAGE RENTALS	695-2116

VEHICLES

K & K TRUCK RENTALS	695-2276

RESTAURANTS

NAHANNI INN	695-2201
NORTHERN TAKE OUT	695-2391
PANDAVILLE	695-3080

HAY RIVER SERVICE DIRECTORY

ACCOMMODATIONS

CAMBRIDGE EXECUTIVE SUITES www.greenwayaccommodations.ca/default.html Apartments with full kitchen, Cable TV	874-2233
CEDAR REST INN Satellite TV, kitchenettes, convenience store	874-3732
HARBOUR HOUSE B&B www.greenwayaccommodations.ca/default.html Old town location	874-2233
ANCHORAGE B&B www.greenwayaccommodations.ca/default.html Old town location	874-2233
MACKENZIE PLACE Apartment building which may rent by day, depending on vacancy	874-2535
NORTH COUNTRY INN (www.ncinn.net) (formerly Caribou Motor Inn and the Migrator motel) satellite in South building, cable in North building, Kitchenette, internet in south building.	874-6792 877-362-4206
PTARMIGAN INN Cable TV, lounge, restaurant, air conditioned rooms and non-smoking rooms available	874-6781

VEHICLES

BUDGET RENTALS	874-7777

RESTAURANTS

BACK EDDY, THE	874-6680
BOARD ROOM, THE	874-2111
COUNTRY CHICKEN & RIBS (THE RED ROOSTER)	874-6349
HAY RIVER BAKERY	874-2322
KEYS, THE (The Ptarmigan)	874-6781
SUB ON THE HUB, THE	874-6898

http://spectacularnwt.com/wheretostay

http://spectacularnwt.com/whattodo/touring/dining

NORMAN WELLS SERVICE DIRECTORY

ACCOMMODATIONS

HERITAGE HOTEL www.heritagehotelnwt.com Dining room, lounge, air conditioning, some suites with kitchenettes	587-5000
SAHTU DENE INN www.mackenzievalleyhotel.com Dining room, coffee shop, apartment units with kitchens available, close to tanker base	587-2511
PYRAMID CAMP	587-2706
WHIPPONIC WELLPUTER CAMP	587-2389
YAMOURI INN Coffee shop, lounge, bar, apartment units with kitchens available	587-2744 1-800-661-0841
RED DOOR EXECUTIVE HOUSE mailto:jpeil.ca	587-2630

VEHICLES

NORMAN WELLS TRANSPORTATION	587-2416
NORTHRIDGE CONTRACTING	587-2050
WHIPPONIC WELLPUTER	587-2389

RESTAURANTS

HERITAGE HOTEL	587-5000
YAMOURI INN	587-2744
MANDI'S (Catering)	587-4456
MACKENZIE VALLEY	587-2511

INUVIK SERVICE DIRECTORY

ACCOMMODATIONS

MACKENZIE HOTEL www.mackenziehotel.com First-Class Dining Room and Lounge, Business Center, Exercise Room, Banquet and Meeting Facilities, Cable TV, Air Conditioning	777-2861
CAPITAL SUITES www.capitalsuites.ca Cable TV, business/fitness center, some kitchenettes, air conditioning	678-6300
NOVA INN www.novaninuvit .ca High Speed Internet access, Fridges in all guests rooms, Microwaves in all suites, Air-conditioning, 27" TV satellite, Laundry facilities	777-6682 1-866-374-6682
POLAR B&B http://polarbedandbreakfast.com	777-2554
ARCTIC CHALET www.arcticchalet.com/	777-3535
MGK CAMP	678-2500
ROBERTSON B&B	777-3111

VEHICLES

ARCTIC CHALET	777-3535
DRIVING FORCE	777-2346

RESTAURANTS

http://spectacularnwt.com/whattodo/touring/dining

SHIVERS	777-4919	TONIMOES	777-4900
CAFÉ GALLERY	777-2888	THE ROOST	777-2727
FAST FOOD CAFE	777-2020		

http://spectacularnwt.com/wheretostay

YELLOWKNIFE SERVICE DIRECTORY

ACCOMMODATIONS

(for other accommodations, refer to http://spectacularnwt.com/where-to-stay)

ANDERSON THOMPSON TOWER www.polardevelopments.com	873-5701
CAPITAL SUITES www.capitalsuites.ca 2-3 bedrooms, apartments have 2 full baths, satellite TV, close to downtown, furnished suites also available	669-6400
DISCOVERY INN www.discoveryinn.ca Cable TV, air conditioned, kitchenettes available, restaurant	873-4151
EXPLORER HOTEL www.explorerhotel.ca Cable TV, dining lounge, coffee shop, night club, air conditioning, parking, gift shop	800-661-0892 873-3531
FRASER TOWER SUITE HOTEL fully equipped kitchens, fitness room, steam room, internet, pet-friendly, in-room movies. www.maclabhotels.com	888-962-2522 873-8700
NORTHERN LITES Cable TV, refrigerators and microwaves available	873-6023
NOVA COURT Suites, fully equipped kitchens, satellite TV, internet	873-6686 866-570-6682
DAYS INN & SUITES www.daysinnyellowknife.com Satellite TV, dining room, lounge, air conditioning, restaurant, parking, downtown, fitness centre, business centre, and internet.	873-9700 1-877-839-1236
ARNICA INN http://arnica-inn.com/ Kitchenettes, air conditioned, internet, continental breakfast	873-8511
SUPER 8 http://www.super8.com/hotels/northwest-territory/yellowknife/super-8-yellowknife/hotel-overview	669-8888
YELLOWKNIFE INN www.yellowknifeinn.com Cable TV, dining room, lounge, mini bars, air conditioning, downtown location, connected to Centre Square Mall	873-2600 873-2601

VEHICLES

BUDGET RENTALS	920-9209 445-6167 (cell)
NATIONAL CAR RENTAL	920-2970
RENT A RELIC	873-3400
HERTZ	766-3838

RESTAURANTS

(for other Yellowknife restaurants, refer to http://spectacularnwt.com/what-to-do/touring/dining)

BOSTON PIZZA	920-2000
BRUNO'S PIZZA	920-2130
KFC	873-2777
MONKEY TREE	669-9623
RED APPLE	766-3388
MARK'S FAMILY RESTAURANT	920-7878

Continued

ENR - COMMUNICATION DIRECTORY

Yellowknife.....XLJ-214		
FREQ.	FM	F4
	AIR	122.05
RPTRS	Edzo	F13
	Faber	F15
	McCrea	F7
	YK City	F3

Behchokǫ̀ (Rae/Edzo)		
FREQ.	FM	F14
RPTRS	Edzo	F13
Whati		
FREQ.	FM	F16
RPTRS	Faber	F15

Frank Channel....XLJ-70		
FREQ.	FM	F14
RPTRS	Edzo	F13
Lutselk'e....XMP-208		
FREQ.	FM	F1
RPTRS	McLean Bay	F2

Fort Smith....XLI-57		
FREQ.	FM	F1
	AIR	122.05
RPTRS	Tsu Lake	F15
	Long Island	F9
	Hill Island	F3
Fort Resolution....XLJ-83		
FREQ.	FM	F10
RPTRS	Long Island	F9
	Tsu Lake	F3

Fort Providence....XMP-204		
FREQ.	FM	F6
RPTRS	Horn	F3
	Cameron	F7

Hay River....XLI-55		
FREQ.	FM	F6
RPTRS	Cameron	F7

Inuvik....XLJ-78		
FREQ.	FM	F1
RPTRS	Travaillant	F3
	Goodenough	F2
	Parsons	F15

Aklavik		
FREQ.	FM	F1
RPTRS	Goodenough	F2

Fort McPherson....CBF-213		
FREQ.	FM	F1
RPTRS	Goodenough	F2

Norman Wells....XLJ-220		
FREQ.	FM	F1
RPTRS	Hammer	F2
	Gibson	F7
	Clark	F3
	Colville	F13
FREQ.	FM	F1

Fort Good Hope....XMB-317		
FREQ.	FM	F6
RPTRS	Gibson	F7
Deline....XLI-822		
FREQ.	FM	F4
RPTRS	Clark	F3

Tulita.....XMB-890		
FREQ.	FM	F4
RPTRS	Clark	F3

Fort Simpson....XMP-203		
FREQ.	FM	F6
RPTRS	Camsell	F7
	Cap Mountain	F9
	Nahanni	F3
	Redknife	F2

Fort Liard....XLJ-215		
FREQ.	FM	F4
RPTRS	Nahanni	F3

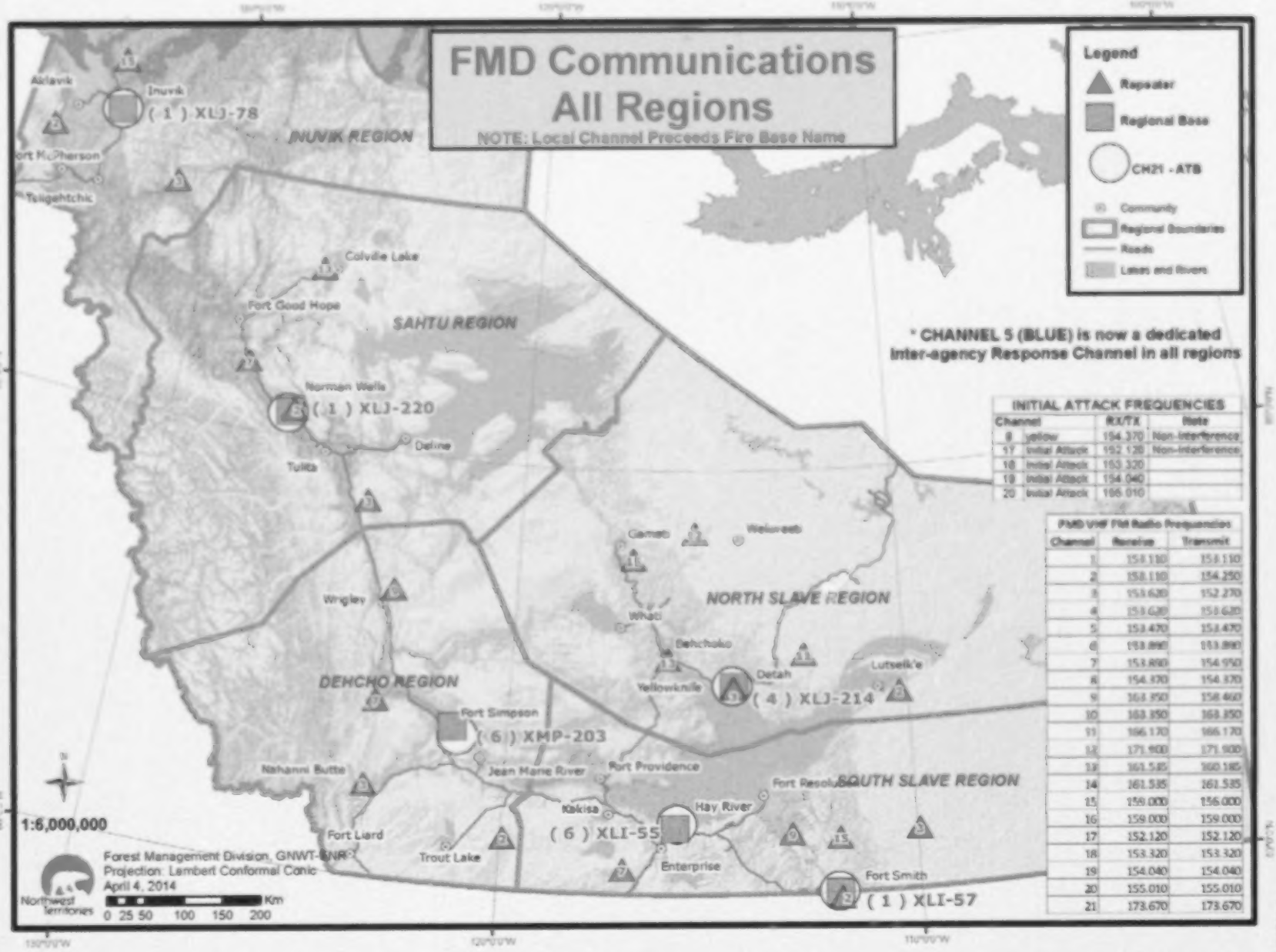
Wrigley		
FREQ.	FM	F6/F10
RPTRS	Cap Mountain	F9

FIRE ATTACK BASES

Inuvik Region – Sunny Lake		
FREQ.	FM	F1/F4
RPTRS	Travaillant	F3
	Goodenough	F2

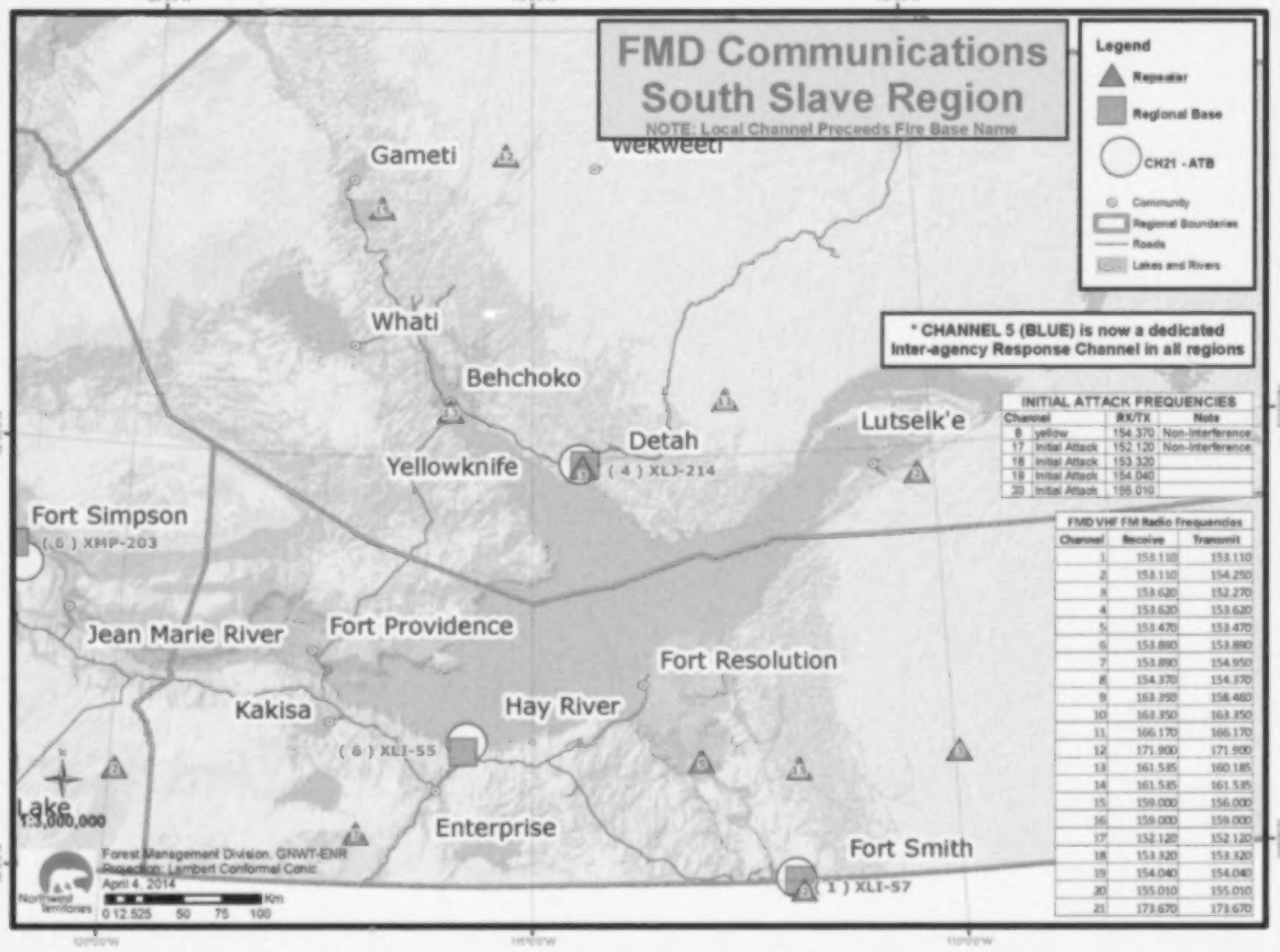
Dehcho Region – Trout Lake		
FREQ.	FM	F14
RPTRS	Redknife	F2

AIR ATTACK RADIO FREQUENCIES					
122.05	Air to Air/Region	**122.65**	**ATB/Bombing PRI**	122.25	ATB/Bombing SEC
122.40	Assigned	122.425	Assigned	122.625	Assigned
122.90	Assigned	129.95	Assigned	131.85	Assigned



INITIAL ATTACK FREQUENCIES			
Channel		RX/TX	Note
8	yellow	154.370	Non-Interference
17	Initial Attack	152.120	Non-Interference
18	Initial Attack	153.320	
19	Initial Attack	154.040	
20	Initial Attack	155.010	

FMD VHF FM Radio Frequencies		
Channel	Receive	Transmit
1	158.130	158.130
2	158.130	154.250
3	153.620	152.270
4	153.620	153.620
5	153.470	153.470
6	153.890	153.890
7	153.890	154.950
8	154.370	154.370
9	158.850	158.460
10	158.850	158.850
11	166.170	166.170
12	171.900	171.900
13	161.535	160.185
14	161.535	161.535
15	156.000	156.000
16	159.000	159.000
17	152.120	152.120
18	153.320	153.320
19	154.040	154.040
20	155.010	155.010
21	173.670	173.670

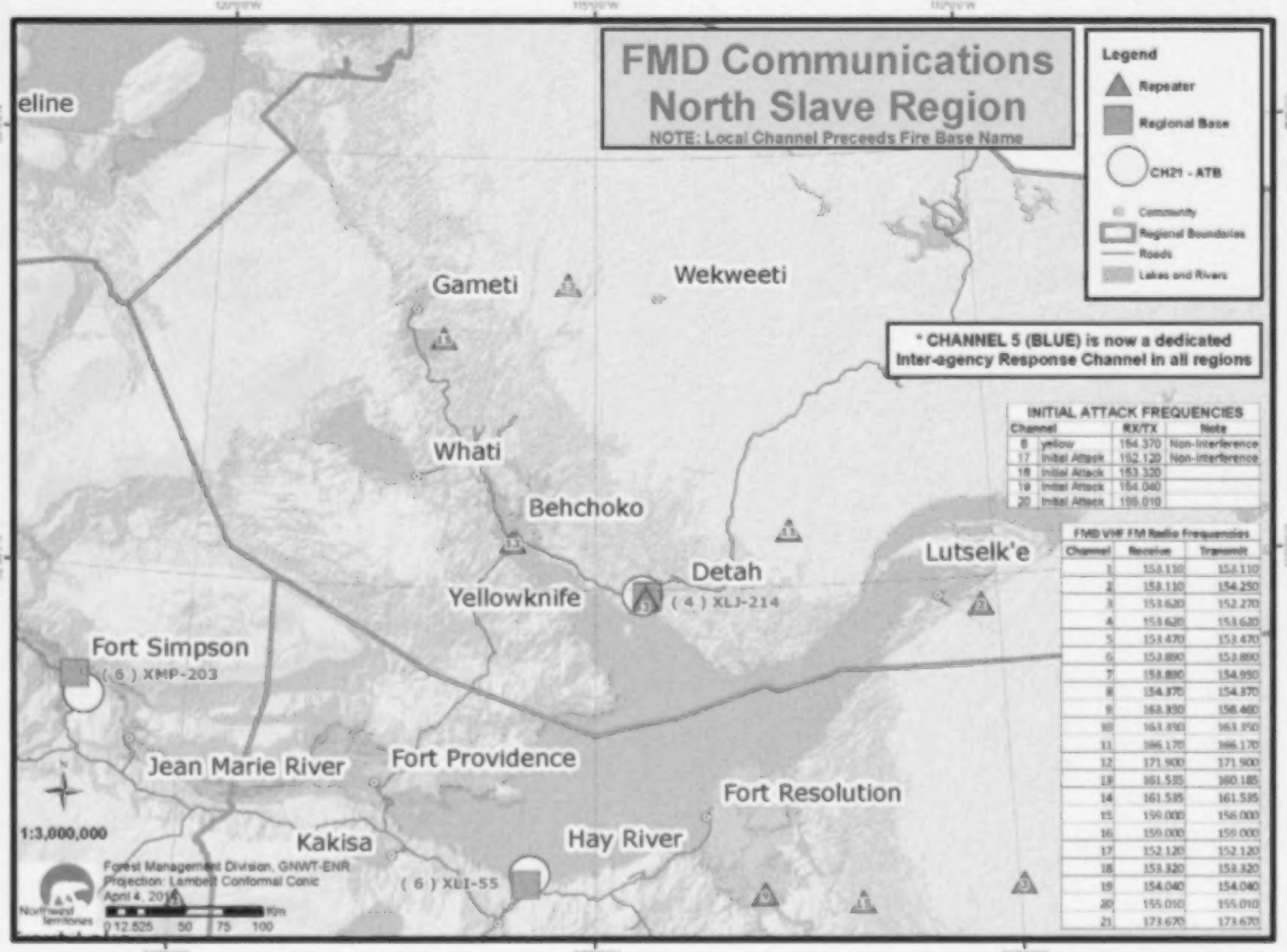


INITIAL ATTACK FREQUENCIES

Channel		RX/TX	Note
8	yellow	154.370	Non-Interference
17	Initial Attack	152.120	Non-Interference
18	Initial Attack	153.320	
19	Initial Attack	154.040	
20	Initial Attack	155.010	

FMD VHF FM Radio Frequencies

Channel	Receive	Transmit
1	158.110	158.110
2	158.110	154.250
3	158.620	152.270
4	158.620	158.620
5	158.470	158.470
6	158.890	158.890
7	158.890	154.950
8	154.370	154.370
9	168.260	158.460
10	168.350	168.350
11	166.170	166.170
12	171.900	171.900
13	161.585	160.185
14	161.585	161.585
15	159.000	156.000
16	159.000	159.000
17	152.120	152.120
18	158.820	158.820
19	154.040	154.040
20	155.010	155.010
21	173.670	173.670



INITIAL ATTACK FREQUENCIES

Channel		RX/TX	Note
8	yellow	154.370	Non-interference
17	Initial Attack	152.120	Non-interference
18	Initial Attack	153.320	
19	Initial Attack	154.040	
20	Initial Attack	155.010	

FMD VHF FM Radio Frequencies

Channel	Receive	Transmit
1	159.180	159.180
2	159.180	154.250
3	159.630	152.270
4	159.630	159.630
5	159.470	159.470
6	159.890	159.890
7	159.890	154.950
8	154.370	154.370
9	160.890	156.460
10	163.890	163.890
11	166.170	166.170
12	171.900	171.900
13	161.535	160.185
14	161.535	161.535
15	159.000	156.000
16	159.000	159.000
17	152.120	152.120
18	153.320	153.320
19	154.040	154.040
20	155.010	155.010
21	173.670	173.670

INITIAL ATTACK FREQUENCIES			
Channel		RX/TX	Note
8	yellow	154.370	Non-Interference
17	Initial Attack	153.120	Non-Interference
18	Initial Attack	153.320	
19	Initial Attack	154.040	
20	Initial Attack	155.010	

FMD VHF FM Radio Frequencies		
Channel	Receive	Transmit
1	153.110	153.110
2	153.110	154.250
3	153.020	152.270
4	153.020	153.020
5	133.470	133.470
6	153.890	153.890
7	153.890	154.090
8	154.370	154.370
9	163.950	158.460
10	163.950	163.950
11	166.170	166.170
12	171.900	171.900
13	161.535	160.185
14	161.535	161.535
15	156.000	156.000
16	159.000	159.000
17	152.120	152.120
18	153.320	153.320
19	154.040	154.040
20	155.010	155.010
21	173.670	173.670

FMD Communications
Sahtu Region
NOTE: Local Channel Preceeds Fire Base Name
Legend
Repeater
Regional Base
CYKD - ATB
Community
Regional Boundaries
Roads
Lakes and Rivers
Fort Good Hope
Colville Lake
Norman Wells
Tulita
Deline
Wrigley
* CHANNEL 5 (BLUE) is now a dedicated inter-agency Response Channel in all regions
INITIAL ATTACK FREQUENCIES
1:3,000,000
Forest Management Division, GNWT-ENR
Projection: Lambert Conformal Conic
April 4, 2014

FMD Communications
Inuvik Region
NOTE: Local Channel Precedes Fire Base Name
Legend
Repeater
Regional Base
CH21 - ATB
Community
Regional Boundaries
Roads
Lakes and Rivers
Tuktoyaktuk
Aklavik
Inuvik
(1) XL3-78
Fort McPherson
Tsiigehtchic
Paulatuk
Fort Good Hope
Colville Lake
Norman Wells
(1) XL3-220
1:3,000,000
Forest Management Division, GNWT-ENR
Projection: Lambert Conformal Conic
April 4, 2014
Northwest Territories
0 12.525 25 75 100 Km
* CHANNEL 5 (BLUE) is now a dedicated Inter-agency Response Channel in all regions
INITIAL ATTACK FREQUENCIES
Channel
Role
R/T/K
6 yellow
17 Initial Attack 164.370 Non-Interference
18 Initial Attack 163.120 Non-Interference
19 Initial Attack 163.320
10 Initial Attack 164.040
20 Initial Attack 155.010
FMD VHF FM Radio Frequencies
Channel
Receive
Transmit

FLIGHT SERVICES/C.A.R.S. CONTACT NUMBERS

Area Code: 867

Fort Smith	872-2376	Norman Wells	587-2555
Hay River	874-2441	Inuvik	777-2522
Yellowknife	873-4049	Fort Simpson	695-2491

NOTICE OF CREW CHANGE

To: AVIATION SERVICES – Email: Aviation@gov.nt.ca OR FAX: (867) 872-2148

Company Name: _____

_____
Name of Authorized Representative (please print)

Contract Number: _____

_____
Signature of Authorized Representative

We hereby give notice of not less than forty-eight (48) hours in advance that a crew change will take place as follows:

The following crew meet the specifications for flight and maintenance crews as required by the contract and standing offer agreement:

Effective Date: _____

Pilot Name: _____ to replace Pilot: _____

License No. _____

Engineer Name: _____ to replace Engineer: _____

License No:

Remarks: _____

Forest Management Division – Phone (867) 872-7700

NOTICE OF AIRCRAFT CHANGE

To: AVIATION SERVICES – Email: Aviation@gov.nt.ca OR FAX: (867) 872-2148

Company Name: _____

_____
Name of Authorized Representative (please print)

Contract Number: _____

_____
Signature of Authorized Representative

We hereby give notice of not less than forty-eight (48) hours in advance that an aircraft change will take place as follows:

Effective Date: _____

Aircraft Reg#: _____ to replace Aircraft Reg#:: _____

Aircraft Type: _____ to replace Aircraft Type: _____

Remarks: _____

Forest Management Division – Phone (867) 872-7700

STOCK #	DESCRIPTION	LB	KG
100LLDR	AVIATION FUEL 100LL 205 LITRE DRUM	365	165.6
JET1DR	AVIATION FUEL JET A 205 LITRE DRUM	400	181.6
FA105	AXE BOYS 2.5 LB HEAD 28" HANDLE	4.5	2.0
FA105L	AXE MANS 3.5 LB HEAD 36" HANDLE	5.5	2.5
RG100BX	BAG HOSE NYLON ORANGE (BOX OF 10)	23	10.4
RG0089BX	BATTERIES "AA" CELL BOX OF 144	5	2.3
RG0085BX	BATTERIES "D" CELL BOX OF 90	30	13.6
28-2	BATTERY NI-CAD NIFE SUNICA	61.5	27.9
016868	BATTERY NON-SPILLABLE SUNLYTE QD WEA KIT	69.1	31.3
RG0445	BOARD SPINE W/RESTRAINTS	21	9.5
TYPE3R	BOX BATTERY METAL QD WEA KIT	55.2	25
TYPE3RFULL	BOX BATTERY METAL QD WEA KIT W/2 BATTERY	193	87.5
RG0419	BOX PACKING CHAINSAW BUNDLE OF 5	26.5	12.0
RG0105	BOX PACKING HOSE WAXED BUNDLE OF 15	28.5	12.9
RG0420	BOX PACKING POWER PUMP BUNDLE OF 5	26	11.8
RG0683	CABINET FIRST AID STATION UTILITY	50	22.7
W500	CAN JERRY FUEL PLASTIC WEDCO 5 GL M/T	4	1.8
W500BX	CAN JERRY FUEL PLASTIC WEDCO (BX OF 6)	19	8.6
W150	CAN JERRY FUEL/OIL 2 PT WEDXO 2.5 GL M/T	2.2	1.0
W150BX	CAN JERRY FUEL/OIL PLASTIC WEDCO (BX OF 12)	14.5	6.6
026	CHAINSAW STIHL 16" BAR W/GUARD	14	6.4
026BX	CHAINSAW STIHL 16" BAR W/GUARD (2) BOXED	33	15
066	CHAINSAW STIHL 36" BAR	25.5	11.6
066BX	CHAINSAW STIHL 36" BAR W/GUARD	31	14.1
RG0625	CHAPS CHAINSAW KEVLAR (BOX OF 10)	26	11.8
NWT#1BX	CONTAINER FIRST AID NWT#1 M/T BOX OF 6	32	14.5
NWT#2BX	CONTAINER FIRST AID NWT#2 M/T BOX OF 3	22.3	10.1
NWT#3BX	CONTAINER FIRST AID NWT#3 M/T BOX OF 2	25.5	11.6
891002	CONTAINER WATER (PG OF 6)	12	5.4
5286	COOLER FOOD 64.3 LITER	14.5	6.6
COT	COT W/MATRESS FIRST AID STATION	25	11.3
20/96/6	FENCING GAME 330' X 8' ROLL	400	181.4
RG0134	FLY/TARP CANVAS W/ROPE > OR = 12 x 14'	15.5	7.0
FT104DR	FOAM FIRE 205 LITRE DRUM	490	222.3
3 X 8	GATE GAME FENCE 3' X 8' SINGLE	49	22.2
RG0072	HOSE FIRE COTTON Q/C 100'X 1.5" 1 ROLL	13	5.9
RG0072BX	HOSE FIRE COTTON Q/C 100'X 1.5" (BOX OF 5)	65	29.5

STOCK #	DESCRIPTION	LB	KG
RG0072FD	HOSE FIRE COTTON Q/C FOLDED BOX OF 4	52	23.6
FH7	HOSE FIRE STAFLO Q/C 100' x 1.5" 1 ROLL	12	5.4
FH7BX	HOSE FIRE STAFLO Q/C 100'X 1.5" BOX OF 5	62	28.1
FH7FD	HOSE FIRE STAFLO Q/C FOLDED BOX OF 4	50	22.7
RG0777	HOSE SUCTION DRAFTEX 2" X 10'/8'	5	2.3
RG0892	HOSE SUCTION DRAFTEX 2" X 5' COUPLED	2	0.9
MK10110	HOSE SUCTION RIB RUBBER 2" X 10'/8'	14.5	6.6
MK284	HOSE SUCTION RIB RUBBER W/FV 4" x 10'	37	16.8
RG0291	KIT FIRST AID NWT #1 COMPLETE	7.5	3.4
RG0415	KIT FOAM SUCTION/INDUCTION INJECTION	31	14.1
RG0004	KIT MESS 25 MAN COMPLETE W/WOODEN BOX	190	86.2
RG0011	KIT TOOL FIRE CHAINSAW COMPLETE	13.5	6.1
RG0007	KIT TOOL FIRE PUMP COMPLETE	34.5	15.6
RG0918	KIT TOOL SPRINKLER COMPLETE RAINBIRD	57.5	26.1
RG0924	KIT TOOL UTILITY PUMP COMPLETE	11	5
RG0152	MATTRESS AIR COTTON/VINYL BOX OF 10	57	25.9
ATC08BX	OIL MIXING 2 CYCLE 8 OZ (BOX OF 12)	7	3.2
RG0414	OUTHOUSE PORTABLE NATURES OWN	69	31.3
RG0156	PACK PERSONAL EFF (BX OF 40)	124	56.2
RG0609	PACK PERSONAL SEASONAL/PERM (BOX OF 7)	20	9.1
RG0069	POLYTHENE	31	14.1
POST10	POST GAME FENCE GALVAN SCH 40 HD 10'	21	9.5
POST11	POST GAME FENCE GALVAN SCH 40 HD 11'	24	10.9
POST8	POST GAME FENCE GALVAN SCH 40 HD 8'	17	7.7
FA107	PULASKI MATTOCK & AXE 5 LB 36" HANDLE	5.5	2.5
HP02BX	PUMP BACK PACK "PISS"(BX OF 10)	72	32.7
1216	PUMP END MK3	16	7.3
MK75	PUMP FIREFIGHTING PRESSURE WAJAX	220	99.8
MK3	PUMP FIREFIGHTING PRESSURE WAJAX	58	26.3
MK3BX	PUMP FIREFIGHTING PRESSURE WAJAX BOXED	64	29.0
YP20G	PUMP FIREFIGHTING VOLUME YAMAHA	58	26.3
YP20GABX	PUMP FIREFIGHTING VOLUME YAMAHA BOXED	64	29.0
QCP121	PUMP TANAKA 1" (AREINS WP200)	13.5	6.1
TCP210	PUMP TANAKA 1" (AREINS WP210)	11.5	5.2
WICKMAN100	PUMP UTILITY MERCEDES	18	8.2
WICKMAN100BX	PUMP UTILITY MERCEDES BOXED	19.5	8.8
RG0170	ROBE SLEEPING SUMMER BOX OF 24	74	33.6

STOCK #	DESCRIPTION	LB	KG
RG0173	ROPE ROLL 1/2"	17.5	7.9
RG0171	ROPE ROLL 1/4" 1200 FT	16	7.3
RG0174	ROPE ROLL 3/4"	19	8.6
RG0172	ROPE ROL 5/16" (OR 3/8") 600 FT	20.5	9.3
RG0583	SHELTER WEATHER INSTRUMENTS LARGE	45	20.4
FA109	SHOVEL FIRE FIGHTING 36" HANDLE	4	1.8
10A	SHOWER PORTABLE PROPANE NO PUMP	98.5	44.7
SCG	SHOWER SUITCASE TYPE NO PUMP	51	23.1
RG0611	SIGN OUTDOOR PLYWOOD "FOREST FIRE DANGER"	85	38.6
RG0642	SIGN OUTDOOR PLYWOOD 4' X 8' "HOLD IT..."	77	34.9
4S	SINK WASH HAND/FACE FOLDING FRAME W/BOX	86	39.0
RG0093 (300)	SOCKS WORK WOOL (300 PAIR/BOX)	84	38.1
RG0093 (96)	SOCKS WORK WOOL (96 PAIR/BOX)	26.5	12
A7	SPARKPLUG NGK (MK3) CASE OF 100	19	8.6
RG0442	SPLINT KIT SET OF 15 WOOD ASSORTED	39	17.7
RG0190	STOVE WOOD AIRTIGHT 18"	10.5	4.8
RG0191	STOVE WOOD CAMP 4 HOLE W/OVEN & LEGS	33	15.0
RG0023	STRETCHER BASKET TYPE W/STRAPS	25	11.3
RG0196	STRETCHER CANVAS FOLDING DF99	18.5	8.4
RG0022	STRETCHER SCOOP BREAK-APART W/STRAPS	26	11.8
FA552Q	TANK FUEL POLY 5 GAL Q/C INSERT	6.2	2.8
5A552QBX	TANK FUEL POLY Q/C INSERT (4) BOXED	28.5	12.9
RG0317	TANK RELAY FREE STANDING 0500 GL RUBBER	36	16.3
RG0596	TANK RELAY FREE STANDING 1500 GL RUBBER	64	29.0
RG0319	TANK RELAY FREE STANDING 2500 GL RUBBER	81	36.7
FA16615	TANK RELAY POLY 1500 GL	34.5	15.6
RG0203	TENT CANVAS 14' x 12' x 3.5'	40	18.1
RG0730	TENT FIRST AID STATION	40	18.1
RG0204	TENT POLY 14' x 12' x 3.5' W/ROPE	25	11.3
RG0063	TENT POLYESTER/VINYL CASCADE SHOWER	158	71.7
RG0062	TENT POLYESTER/VINYL HABITAT OFFICE	328	148.8
RG0061	TENT POLYESTER/VINYL RANGER KITCHEN	291.5	132.2
QESC1014	TENT/SHELTER DECON (3 BAGS)	190	86.2
RG0207	TORCH DRIP SEALTITE	5	2.3
DMX68L	TOWER COMMUNICATIONS 8 SECTIONS LARGE	373	169.2

NWT BASE CAMPCOORDINATES

REGION	BASE	COORDINATES DECIMAL				COORDINATES STANDARD			
		Latitude		Longitude		Latitude		Longitude	
Dehcho	Dehcho Headquarters	61	.8000	121	.3000	61	49	121	19
Dehcho	Fort Liard	60	.2333	123	.4500	60	14	123	27
Dehcho	Trout Lake Base Camp	60	.4333	121	.4000	60	26	121	24
Dehcho	Wrigley	63	.2166	123	.4333	63	13	123	26
Inuvik	Fort McPherson	67	.4166	134	.8833	67	25	134	53
Inuvik	Ninelin Lake Base Camp	67	.8500	131	.3500	67	51	131	21
Inuvik	Shell Lake Headquarters	68	.3333	133	.6333	68	20	133	38
Inuvik	Shiltee Tower	67	.2500	135	.0333	67	15	135	02
Inuvik	Sunny Lake Base Camp	67	.8500	132	.6000	67	51	132	36
Inuvik	Tsiigehtchic *(Arctic Red River)*	67	.4400	133	.7333	67	26	133	44
Inuvik	Twin Lake Base Camp	67	.2333	134	.7166	67	14	134	43
North Slave	Armi Lake Base Camp	63	.7000	114	.2000	63	42	114	12
North Slave	Awry Lake Base Camp	62	.9333	114	.9333	62	56	114	56
North Slave	Faber Lake Base Camp	63	.9333	117	.1833	63	56	117	11
North Slave	Francois Lake Base Camp	62	.4833	112	.4000	62	29	112	24
North Slave	Frank Channel	62	.8000	115	.9333	62	48	115	56
North Slave	Mert Lake Base Camp	63	.3166	116	.8666	63	19	116	52
North Slave	North Slave Headquarters	62	.4500	114	.3666	62	27	114	22
North Slave	Gameti *(Rae Lakes)*	64	.1000	117	.3666	64	06	117	22
North Slave	Wekweeti (*Snare Lake)*	64	.1833	114	.1833	64	11	114	11
North Slave	Whati *(Lac La Marte)*	63	.2666	117	.2666	63	08	117	16

REGION	BASE	COORDINATES DECIMAL				COORDINATES STANDARD			
		Latitude		Longitude		Latitude		Longitude	
Sahtu	Colville Lake Base Camp	67	.0333	126	.0833	67	02	126	05
Sahtu	Deline *(Fort Franklin)*	65	.1833	123	.4166	65	11	123	25
Sahtu	Fort Good Hope	66	.2500	128	.6166	66	15	128	37
Sahtu	Kelly Lake Base Camp	65	.4166	126	.3833	65	25	126	23
Sahtu	Sahtu Headquarters	65	.2833	126	.8333	65	17	126	50
Sahtu	Stewart Lake Base Camp	65	.3833	125	.2833	64	23	125	17
Sahtu	Tulita *(Fort Norman)*	64	.9000	125	.5833	64	54	125	35
Sahtu	Yeltea Lake Base Camp	66	.8833	129	.3666	66	53	129	22
South Slave	Fort Providence	61	.3500	117	.6500	61	21	117	39
South Slave	Fort Resolution	61	.1666	113	.6833	61	10	113	41
South Slave	Hay River Headquarters	60	.8166	115	.7833	60	49	115	47
South Slave	Kakisa Lake I.A. Base	60	.9833	117	.2666	60	59	117	16
South Slave	Lutselk'e*(Snowdrift)*	62	.4000	110	.7166	62	24	110	43
South Slave	O'Connor Lake I.A. Base	61	.3333	111	.8333	61	20	111	50
South Slave	South Slave Headquarters	60	.0166	111	.9500	60	01	111	57
South Slave	Swat Lake I.A. Base	60	.1666	117	.9166	60	10	117	55
South Slave	Tsu Lake I.A. Base	60	.6500	111	.8500	60	39	111	51

North Slave Region formerly known as the Yellowknife Region.
South Slave Region formerly known as the Fort Smith Region.
Dehcho Region formerly known as the Fort Simpson Region.
Sahtu Region formerly known as the Norman Wells Region.

PILOTS GPS LIST

PILOTS' LIST OF ACTUAL, CORRECTED AND OTHER GPS COORDINATES WITHIN THE NWT MANAGEMENT REGIONS.

THIS CHART HAS BEEN ADDED FOR PILOTS TO ENTER COORDINATES OF FIRE BASES, FUEL CACHES, WILDLIFE CAMPS AND **CORRECTIONS** TO GPS COORDINATES ALREADY LISTED. (Note: Please advise your local ENR authority of all corrections.)

PLACE	GPS COORDINATES *DECIMAL*

PLACE	GPS COORDINATES *STANDARD*